ALTO SHAAM®

ELECTRIC FRYER

FryTech Series

ecosmart™

ASF-60E shown with deluxe control and optional automatic basket lifts

ASF-60E and ASF-75E Electric Fryers with Deluxe Control

ASF-75E shown with deluxe control, optional automatic basket lifts and filtration system

- INSTALLATION
- OPERATION
- MAINTENANCE

FryTech™

24•7 Your Service Hotline 1-800-558-8744

W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 USA
PHONE: 262.251.3800 • 800.558.8744 USA/CANADA FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY
www.alto-shaam.com

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DELIVERY

This Alto-Shaam appliance has been thoroughly tested and inspected to insure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. ***See Transportation Damage and Claims section located in this manual.***

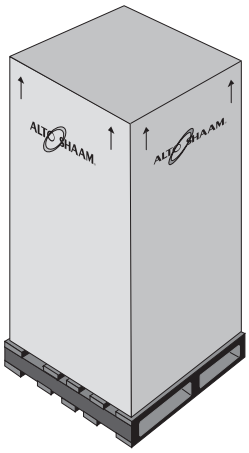
This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to assure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the equipment model. Contact the Alto-Shaam service department if you have any questions concerning installation, operation, or maintenance.

NOTE: All claims for warranty must include the full model number and serial number of the unit.

UNPACKING



1. Carefully remove the appliance from the carton or crate.

   NOTE: Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.

2. Read all instructions in this manual carefully before initiating the installation of this appliance.

   DO NOT DISCARD THIS MANUAL.
   This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. ***Additional manuals are available from the Alto-Shaam service department.***

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.

KEEP THIS MANUAL IN A CONVENIENT LOCATION FOR REFERENCE.

INSTALLATION

SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

DANGER

Used to indicate the presence of a hazard that WILL cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.

WARNING

Used to indicate the presence of a hazard that CAN cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.

CAUTION

Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.

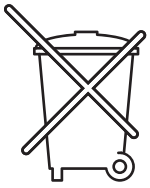
CAUTION

Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.

NOTE: Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

1. This appliance is intended to cook, hold or process foods for the purpose of human consumption. No other use for this appliance is authorized or recommended.
2. This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

NOTE



For equipment delivered for use in any location regulated by the following directive:

DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.

ASF-75E SPECIFICATIONS

DIMENSIONS EXTERIOR H x W x D:
42" x 24-13/16" x 37-7/8"
(1065mm x 630mm x 961mm)
BASKET DIMENSIONS (H x W x D)
11-1/2" x 12-3/4" x 21-3/4"
(292mm x 324mm x 552mm)

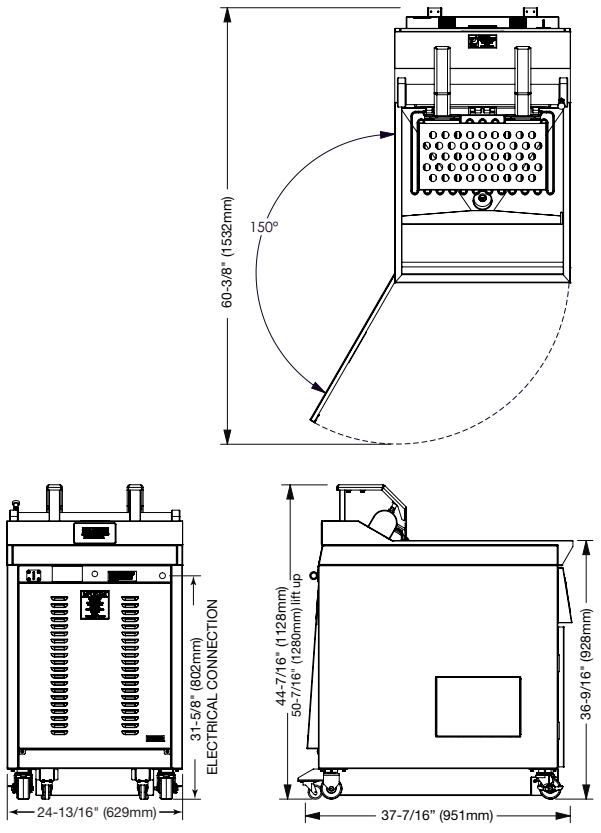
CAPACITY
SHORTENING/OIL:
73 lb (33 kg) MAXIMUM
LOAD CAPACITY:
13 lb (6 kg) MAXIMUM

WEIGHT EST	NET WEIGHT	SHIP WEIGHT
	338 lb (154 kg)	460 lb (209 kg)
CARTON DIMENSIONS: (H x W x D)	50" x 31" x 43" (1270mm x 787mm x 1092mm)	

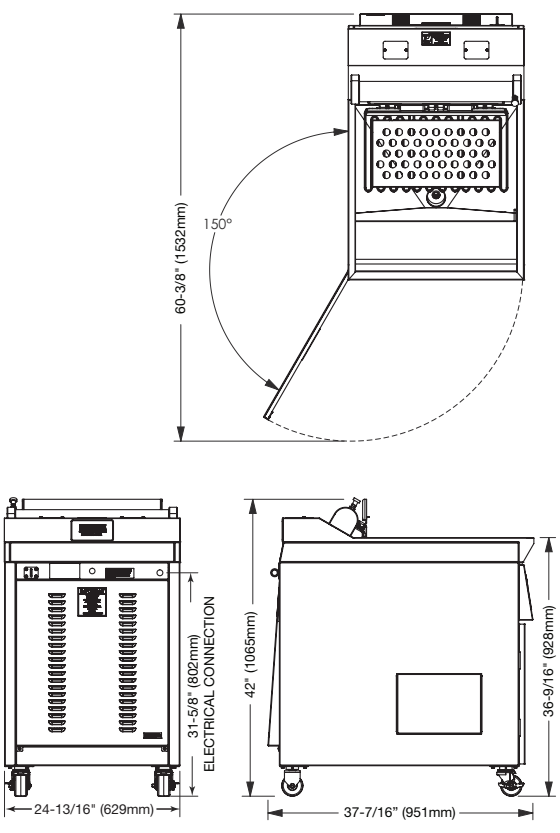
STANDARD ACCESSORIES	
☐ Basket, Half-Size (2 INCLUDED AS STANDARD)	BS-27140
Brush Set (ONE 3-BRUSH SET INCLUDED AS STANDARD)	
☐ ANGLE BRUSH	BH-28692
☐ SCRUB BRUSH	BH-28693
☐ STRAIGHT BRUSH	BH-28691
Filter, Paper (7 PAPER FILTERS INCLUDED AS STANDARD)	
☐ 7 COUNT REFILL PACKAGE	FI-27791
☐ 100 COUNT REFILL PACKAGE	FI-27794

OPTIONS		
☐ Basket, Full-Size (48 CHICKEN PIECE CAPACITY)		BS-26998
FILTERS	☐ Charcoal/Carbon (30 COUNT PKG.)	FI-27648
	☐ Reusable Mesh (SINGLE FILTER)	FI-27014
☐ Fry Pot Cover		5005136
☐ Mobile Drawer Cover		5006073
☐ Strainer/Skimmer		CE-27400
☐ Oil Discard Hose		HO-27686

ASF-75E WITH LIFTS AND FILTRATION



ASF-75E, NO LIFTS OR FILTRATION



INSTALLATION

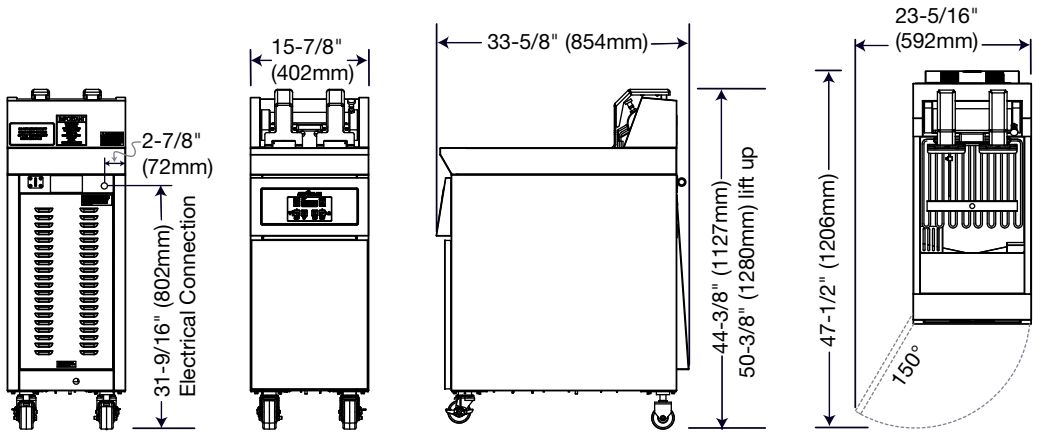
ASF-60E SPECIFICATIONS

DIMENSIONS EXTERIOR H x W x D:
45-1/8" x 15-3/4" x 33-5/8"
(1146mm x 400mm x 854mm)
BASKET DIMENSIONS (H x W x D)
5-7/8" x 5-3/16" x 13-13/16"
(149mm x 131mm x 351mm)

CAPACITY
SHORTENING/OIL:
73 lb (33 kg) MAXIMUM
LOAD CAPACITY:
8 lb (4 kg) MAXIMUM

WEIGHT EST	NET WEIGHT	SHIP WEIGHT
	248 lb (113 kg)	330 lb (150 kg)
CARTON DIMENSIONS: (H x W x D)	39" x 22" x 55" (991mm x 559mm x 1397mm)	

STANDARD ACCESSORIES	
☐ Basket, Half-Size (2 INCLUDED AS STANDARD)	BS-27963
Brush Set (ONE 3-BRUSH SET INCLUDED AS STANDARD)	
☐ ANGLE BRUSH	BH-28692
☐ SCRUB BRUSH	BH-28693
☐ STRAIGHT BRUSH	BH-28691
OPTIONS	
☐ Fry Pot Cover	5007596
☐ Strainer/Skimmer	CE-27400



DANGER

IMPROPER INSTALLATION, ALTERATION, ADJUSTMENT, SERVICE, OR MAINTENANCE COULD RESULT IN SEVERE INJURY, DEATH OR CAUSE PROPERTY DAMAGE.

READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

DANGER

AVERTISSEMENT : UNE INSTALLATION, UN AJUSTEMENT, UNE ALTÉRATION, UN SERVICE OU UN ENTRETIEN NON CONFORME AUX NORMES PEUT CAUSER DES DOMMAGES À LA PROPRIÉTÉ, DES BLESSURES OU LA MORT.

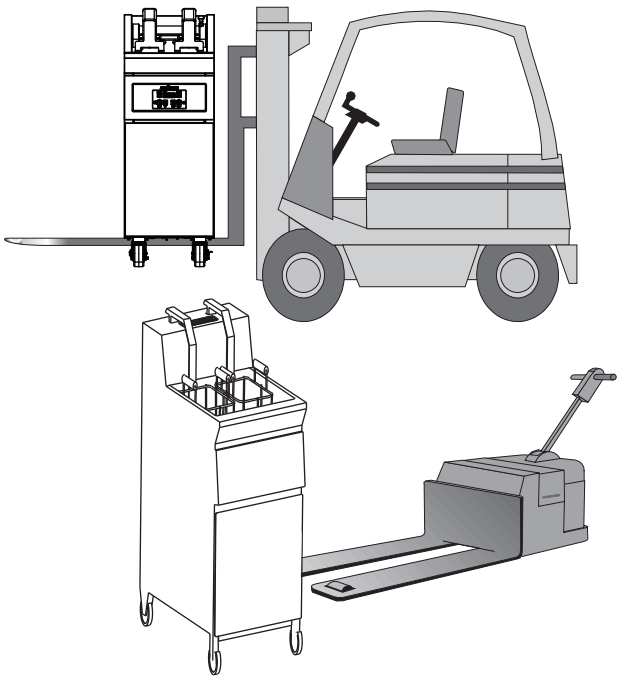
LIRE ATTENTIVEMENT LES DIRECTIVES D'OPÉRATION ET D'ENTRETIEN AVANT DE FAIRE L'INSTALLATION, OU L'ENTRETIEN DE CET ÉQUIPEMENT.

SITE INSTALLATION

NOTE: To avoid equipment damage, remove the Mobile Oil Trolley before moving this appliance with a forklift or pallet lift.

CAUTION

DO NOT USE FORKLIFT FROM FRONT OR REAR OF UNIT. USE FORKLIFT FROM SIDE ONLY.



MINIMUM CLEARANCE REQUIREMENTS

	COMBUSTIBLE SURFACES	NON-COMBUSTIBLE SURFACES
RIGHT SIDE	0" (152mm)	0" (0mm)
LEFT SIDE	0" (152mm)	0" (0mm)
BACK	6" (152mm)	6" (152mm)
FRONT	25" (635mm)	

PLUS: 6" (152mm) minimum between the element swing in the extended position and the lower edge of the exhaust hood and filter media..

ENTRY CLEARANCE: 30" (762mm) UNCRATED

Ne pas installer à une distance inférirure à celle indiquée ce-dessous d'une parol en matiére combustible: Côtés 6 pouches, Arriére 6 pouches.

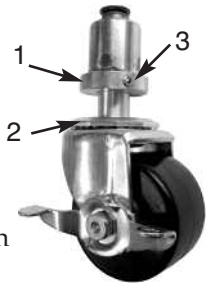
WARNING

MINIMUM CLEARANCES MUST REMAIN UNOBSTRUCTED. DO NOT place insulation or any other type of materials in clearance areas.

INSTALLATION

SITE INSTALLATION

1. It is the responsibility of the installer to verify that this fryer installation is in compliance with the specifications listed in this manual and with local code requirements.
2. Hood installation is required.
3. Both cooking and cleaning functions require unobstructed access. The frypot, control panel, and front access door must be maintained free from obstruction. The access door must be accessible for service and maintenance.
4. Locate the fryer on a firm, level surface ONLY. The area surrounding the fryer must be kept clear of all combustible materials.
5. **FOR YOUR SAFETY DO NOT** store or use any flammable liquids or allow flammable vapors in the vicinity of this fryer or any other appliance.
6. **FOR YOUR SAFETY DO NOT place insulation or any other type of materials in clearance areas.**
7. When properly installed, the electric fryer is designed for operation adjacent to non-combustible floors and walls with a 6" clearance at the back. Clearances from all combustible construction is a minimum of 6" (152mm) at the back and both sides. Concrete, tile, terrazzo, or metal surfaces are recommended. Metal over a combustible material may not meet code for non-combustible surfaces. Verify site selection with local codes for specific requirements.
   Doit être utilisé seulement sur des planchers non inflammables.
8. Adequate means must be provided to limit the movement of this appliance. A restraining device is required for field installation.
9. DO NOT install this fryer in any area where it may be affected by any adverse conditions such as steam or dripping water, etc. DO NOT install the fryer over a drain.
10. **LEVELING:** Make certain the fryer is positioned firmly on all four supporting casters. Level fryer front-to-back and side-to-side by holding lower collar (#2) while twisting upper collar (#1). Restraining ties can be used for stabilization if necessary. Use an allen wrench (#3) to lock caster in position.



DANGER

To avoid electrical shock, this appliance MUST be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/NFPA No. 70. In Canada, all electrical connections are to be made in according with CSA C22.1, Canadian Electrical Code Part 1 or local codes.

WARNING

BURN WARNING: Make certain the fryer is stabilized before operation to prevent any movement or tipping and the possibility of severe burns caused by hot, splashing shortening or oil.

CAUTION

TO PREVENT PERSONAL INJURY, USE CAUTION WHEN MOVING OR LEVELING THIS APPLIANCE.

WARNING

IMPROPER INSTALLATION MAY RESULT IN FIRE.
Carefully read and follow all installation instructions located in this manual.

VENTILATION

⚠ DANGER

Installation, air ventilation requirements, and service work must be in accordance with all local codes and must be performed by a qualified service technician.

An adequate ventilation system is required for commercial cooking equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. When writing refer to NFPA No. 96.

Ventilating hoods and exhaust systems shall be permitted to be used to vent appliances installed in commercial applications.

Where automatically operated appliances are vented through a ventilating hood or exhaust system equipped with a damper or with a power means of exhaust, provisions shall be made to allow the flow of gas to the main burners only when the damper is open to a position to properly vent the appliance and when the power means of exhaust is in operation. IN ACCORDANCE WITH NFPA 54 COMMONWEALTH OF MASSACHUSETTS ONLY.

INSTALLATION

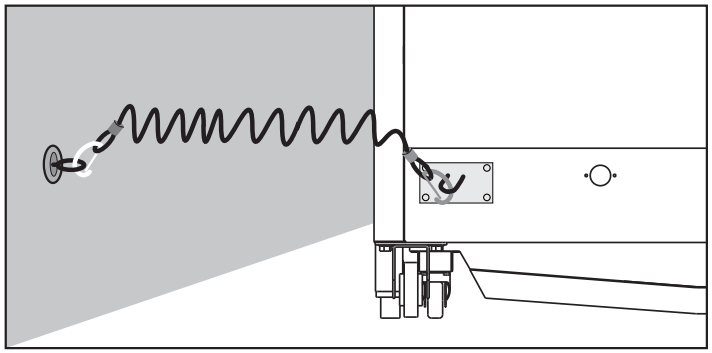
RESTRAINT REQUIREMENTS - MOBILE EQUIPMENT

The fryer must be supplied with a connector that complies with all state and local installation codes.

Any appliance that is not furnished with a power supply cord but that includes a set of casters must be tethered. Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit. The following requirements apply:

1. Casters must be a maximum height of 4-inches (102mm).

2. Such mobile appliances must be installed with the use of a flexible connector secured to the building structure.



A mounting connector for a restraining device is located on the lower back flange of the appliance chassis, approximately 7-inches (178mm) from the floor. A flexible connector is not supplied by nor is it available from the factory.

WARNING

RISK OF ELECTRIC SHOCK.

Appliance must be secured to building structure.

ELECTRICAL REQUIREMENTS

DANGER

To avoid electrical shock, this appliance MUST be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/NFPA No. 70. In Canada, all electrical connections are to be made in according with CSA C22.1, Canadian Electrical Code Part 1 or local codes.

An electrical wiring diagram is located in the front access door of the fryer. The fryer must be installed by a qualified electrician. This appliance must be branch circuit protected with proper ampacities, in accordance with the wiring diagram located in the fryer. The fryer must be properly grounded in accordance with the National Electrical Code and applicable local codes. A means to disconnect the unit must be incorporated into the fixed wiring in accordance with wiring codes.

Wire size for the main incoming power to the unit must match the minimum size listed in the specifications applicable to the specific fryer. For supply connections, locate the wire size posted on the label located on the electrical control box cover, behind the service panel or elsewhere listed in this manual.

Before operating the fryer, check all cable connections in the electrical connection area for tightness since connections can loosen during transport.

DANGER

ENSURE POWER SOURCE MATCHES VOLTAGE STAMPED ON APPLIANCE NAMEPLATE.

230V:

To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances / metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol.

DANGER

APPLIANCES WITH NO CORD PROVIDED BY FACTORY MUST BE EQUIPPED WITH A CORD OF SUFFICIENT LENGTH TO PERMIT THE APPLIANCE TO BE MOVED FOR CLEANING.

ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED SERVICE TECHNICIAN IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.

ELECTRICAL - ASF-60E

VOLTAGE	PHASE	CYCLE/HZ	AMPS	kW
208-220 (AGCY)	3	60	47	17.93
at 208	3	60	45	16.2
at 220	3	60	47.6	18.2
240 (AGCY)	3	60	43	17.93
380-415				
at 380	3	50	20.4	15.4
at 415	3	50	25.4	18.3
440-480 (AGCY)	3	60	21.8	18.1
at 440	3	60	20.4	15.5
at 480	3	60	22.2	18.5
No cord or plug				

ELECTRICAL - ASF-75E

VOLTAGE	PHASE	CYCLE/HZ	AMPS	kW	AWG
208-220(AGCY)	3	60	68.2	26.0	AWG 2
at 208	3	60	66.6	24.0	AWG 2
at 220	3	60	70.8	27.0	AWG 2
240 (AGCY)	3	60	66.8	27.8	AWG 2
380-415 (AGCY)	3	50	38.1	27.5	AWG 6
at 380	3	50	35.2	23.2	AWG 6
at 415	3	50	38.2	27.5	AWG 6
440-480 (AGCY)	3	60	31.3	26.0	AWG 8
at 440	3	60	30.7	23.5	AWG 8
at 480	3	60	33.4	27.85	AWG 8
No cord or plug					

INSTALLATION

ELECTRICAL INSTALLATION

1. Refer to the nameplate on the FRONT of the fryer. Verify the electrical service power. Voltage and phase must match the nameplate specifications and available electrical service amperage must meet or exceed the specifications listed.

NOTE: Wire gauge, insulation type and temperature rating, as well as type, size and construction of conduit, must meet or exceed applicable specifications of local codes and of the National Electrical Code.

Warning!

440-480V - 3 Phase Only
The pump motor should ***rotate clockwise*** when viewed from the rear of the fryer.
To change rotation, swap any two lines of 3 Phase incoming power.

6. The fryer is shipped from the factory wired for 3-phase electrical service. ***This fryer is not approved for conversion to single phase. Converting to single phase will void the warranty and invalidate the ETL certification.***

IMPORTANT: Field wiring must be routed and secured away from the frypot, tubing, and filter pump and motor. Field wiring must allow access to the rear of the fryer for cleaning and for **access to the oil filter pump motor reset button**.

⚠ DANGER

ENSURE POWER SOURCE MATCHES VOLTAGE STAMPED ON APPLIANCE NAMEPLATE.

⚠ DANGER

ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED SERVICE TECHNICIAN IN ACCORDANCE WITH APPLICABLE ELECTRICAL CODES.

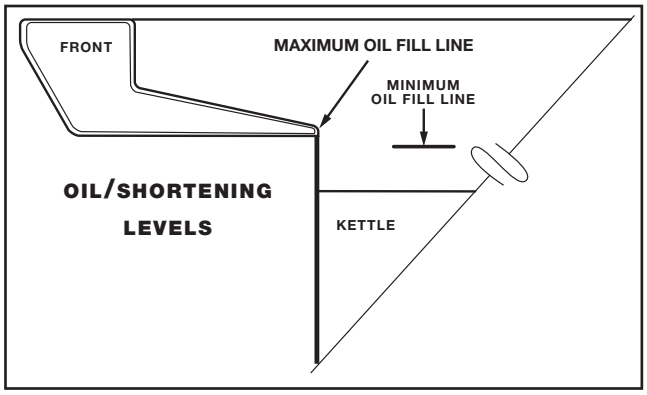
OIL/SHORTENING REQUIREMENTS

The ASF-75E requires 73-pounds (33 kg) of oil or shortening in the frypot and the ASF-60E requires 62-pounds (28 kg) of oil or shortening. Use only quality, high-grade oil/shortening in the fryer. The high moisture content of many lower grade shortening will result in excessive foaming and boil over. The cold oil/shortening level requirement for the fryer is indicated below.

CAUTION

Cold oil or shortening expands as the temperature increases. To avoid injury and equipment damage, allow for expansion by filling 1/2˝ (13mm) below the maximum hot oil fill line.

NOTE: ALWAYS maintain the proper level of shortening by adding fresh oil/shortening to the frypot whenever needed.



WARNING

FAILURE TO PLACE SOLID SHORTENING DIRECTLY ON THE BOTTOM OF THE FRYPOT CAN CAUSE SERIOUS EQUIPMENT DAMAGE.

CAUTION

ENSURE THERE IS NO WATER IN THE FRYPOT BEFORE FILLING WITH OIL/SHORTENING. WHEN COOKING COMPOUNDS ARE HEATED TO COOKING TEMPERATURE, WATER IN THE FRYPOT WILL CAUSE OIL TO SPLATTER AND MAY BE A BURN HAZARD.

Check the quality of the oil/shortening in the frypot on a daily basis for signs of deterioration. Use an approved test kit. Signs of shortening deterioration include excessive boiling, smoking, foaming, bad taste, and rancid odor. Discard any shortening before it degrades to the point of affecting product quality. Always filter the oil on a regular basis and keep the frypot clean.

⚠ DANGER

FLASH POINT

The flash point of shortening occurs at a lower temperature the longer the shortening is used. Discard any shortening showing signs of deterioration to avoid serious burns, fire, and property damage.

Remove ice crystals and ensure that food is dry before frying. Excessive water and ice can cause oil to splatter or overflow. Do not over fill the basket. Food needs to be surrounded by oil for best frying results.

Maximum shortening life is achieved by turning the fryer stations off when not in use. In multiple-station units, heat only the component fryers necessary to meet cooking needs.

CAUTION

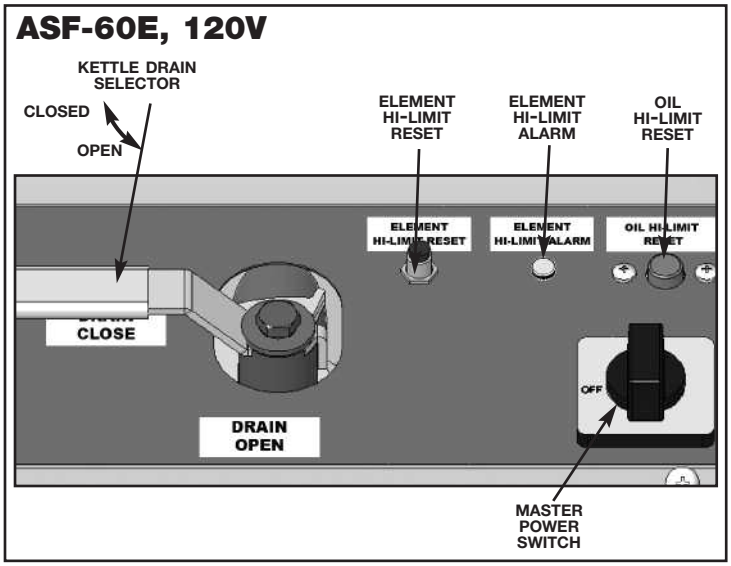
FIRE OR EQUIPMENT DAMAGE CAN RESULT FROM IMPROPER SHORTENING LEVELS. THE LEVEL OF SHORTENING MUST ALWAYS BE ABOVE THE HEATING ELEMENTS WHEN THE FRYER IS OPERATING.
THE REQUIRED SHORTENING LEVEL MUST ALWAYS BE ABOVE THE MINIMUM HOT OIL FILL LINE.

CAUTION

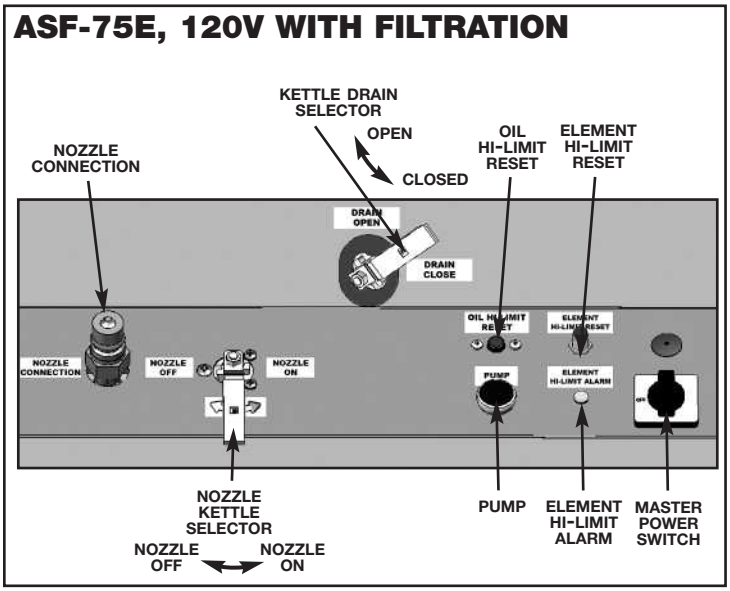
METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

OPERATION

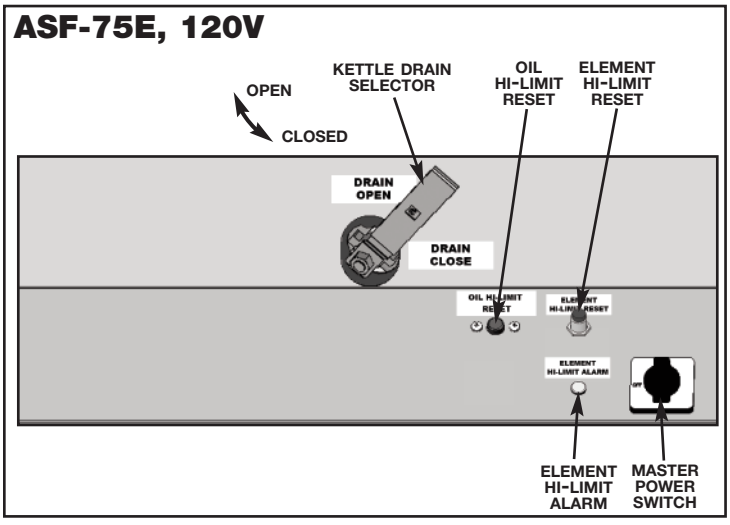
ASF-60E, 120V



ASF-75E, 120V WITH FILTRATION



ASF-75E, 120V



NOTE: Perform an initial Boil-Out to clean and sanitize the fryer station before operating.

Carbonized deposits along with an accumulation of oil will eventually build-up on the interior of the frypot as well as fryer accessories. It is important to periodically remove these deposits, not only to maintain fryer efficiency, but also to provide the highest product quality.

NOTE: Because each fryer station is controlled separately, the following procedure must be followed for every component fryer in multiple-station units.

NOTE: Manual Boil-Out can only be performed when the actual temperature of the frypot is less than 230°F (110°C).

CAUTION

BEFORE ENTERING THIS PROGRAM, MAKE CERTAIN THE FRYPOT IS EMPTY OF ALL OIL OR SHORTENING.

CAUTION

TO AVOID DAMAGING THE PUMP AND CONTAMINATING CLEAN OIL WITH BOIL-OUT CHEMICAL ON UNITS EQUIPPED WITH A FILTRATION SYSTEM, NEVER ALLOW BOIL-OUT SOLUTION OR RINSE WATER TO CIRCULATE THROUGH THE FRYER PUMP SYSTEM OR FAT DRAWER.

CAUTION

BOIL-OUT SOLUTION AND SURROUNDING METAL SURFACES BECOME EXTREMELY HOT. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN PERFORMING THE BOIL-OUT FUNCTION AND FOLLOW THE MANUFACTURER'S SAFETY INSTRUCTIONS FOR THE BOIL-OUT PRODUCT BEING USED.

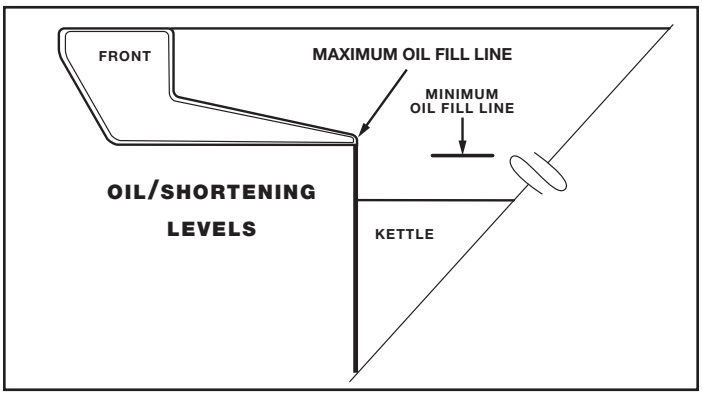
CAUTION

DO NOT LEAVE THE FRYER UNATTENDED DURING THE BOIL-OUT PROCESS. THE FRYER MUST BE CONTINUOUSLY MONITORED FOR BOIL-OVER CONDITIONS, PARTICULARLY IN HIGH-ALTITUDE LOCATIONS. IF BOIL-OVER IS IMMINENT, IMMEDIATELY TURN THE MASTER POWER SWITCH OFF AND ALLOW THE SOLUTION TO COOL. WHEN THE SOLUTION HAS COOLED, RE-ENTER THE BOIL-OUT MODE.

1. After emptying the fryer of oil or shortening, remove filter cartridge from unit if equipped with a filtration system. (See filtration instructions on page 19.) Close the **DRAIN**. **The handle should be rotated clockwise until it stops.**

NOTE: Always wear eye protection or a face shield and protective rubber gloves when cleaning the frypot as boil-out chemical is an alkaline solution and can cause severe burns.

2. Fill the fryer to the maximum oil fill line with a mixture of cold water and fryer boil-out solution. Carefully follow the manufacturer's directions for mixing the boil-out solution.



CAUTION

KEEP A CONTAINER OF COLD WATER ON HAND DURING BOIL-OUT IN CASE OF BOIL-OVER. IF BOIL-OVER IS IMMINENT, IMMEDIATELY TURN OFF MASTER POWER SWITCH AND POUR COLD WATER INTO FRYPOT TO QUICKLY REDUCE SOLUTION

3. Turn the Master Power Switch (located within the front access door) to the **"ON"** position.

4. Press the **ELEMENT HI-LIMIT RESET** button.

5. Wait until the **LED** reads **"HEAt"**, then press the **BOIL OUT** button on the control panel.

6. When 192°F (89°C) is reached, the **LED** will display **"bOIL"** and that temperature will be maintained. Using a separate timer, allow the frypot to boil-out for 10 minutes.

7. Turn the Master Power Switch located behind the front access door to the **"OFF"** position.

OPERATION

BOIL-OUT

8. Wearing protective gloves to avoid burns, scrub the inside of the fypot with a long-handled scrub brush.

9. Attach the drain pipe and direct boil-out solution into a heat-resistant container.

10. Open the **DRAIN**. **The handle should be rotated counterclockwise until it stops.**

11. Allow the boil-out solution to completely drain. Discard boil-out solution.

12. Rotate the drain valve clockwise to the **"CLOSED"** position. Follow the boil-out solution manufacturer's additional boil-out instructions to rinse the frypot and neutralize boil-out cleaner residue.

13. There may be residual boil-out solution in the oil fill hole and tube. This must be flushed out and discarded separately before filling the tank with new oil to avoid contamination of new oil.

14. Following the boil-out and rinse procedure, wipe dry all accessible interior metal surfaces and interior accessories with a clean, dry cloth to remove remaining moisture. Clean and dry the fry baskets separately.

CAUTION

ENSURE THERE IS NO WATER IN THE FRYPOT BEFORE FILLING WITH OIL/SHORTENING. WHEN COOKING COMPOUNDS ARE HEATED TO COOKING TEMPERATURE, WATER IN THE FRYPOT WILL CAUSE OIL TO SPLATTER AND MAY BE A BURN HAZARD.

NOTE: Make sure the inside of the frypot, the drain opening and all parts that come into contact with new oil/shortening are as dry as possible.

15. Wipe the exterior of the fryer cabinet with a degreaser/sanitizer suitable for use on food contact surfaces. Always follow the manufacturer's instructions and/or mixing directions for proper solution strengths.

Wipe exterior stainless steel surfaces with the grain of the metal and avoid the use of abrasive pads, steel wool, or metal implements.

16. Fill tank with new oil or shortening.

START UP & GENERAL OPERATION

NOTE: Perform an initial Boil-Out to clean and sanitize the fryer station before operating.

1. Service is to be performed by an authorized Alto-Shaam service agent.
2. Assure all local electrical codes, fire codes, and all other requirements such as hood installation have been met in the process of installation.

NOTE: Because each fryer station is controlled separately, the following procedures must be followed for every component fryer in multiple-station units.

3. Open front access door and ensure drain valve is closed. **The handle should be rotated clockwise until it stops.**
4. Fill frypot with frying compound as indicated. (SEE ILLUSTRATION ON THE OIL/SHORTENING REQUIREMENTS PAGE)
5. The Master Power Switch is located behind the front access door. Turn Master Power Switch **"ON."**
6. Press the **ELEMENT HI-LIMIT RESET** button.
7. The **LED** display on the control panel will indicate **"-AS-"**, the software version, and then **"CY"**.
8. When the fryer has reached 135°F, the melt cycle is complete and the **LED** display on the control panel will indicate **"HEAt"**.
9. When the fryer displays the set-point temperature, product can be fried.
10. More detailed operating guidelines along with information on programming are located within this manual.
11. To shut the fryer station down, turn the Master Power Switch located behind the front access door to the **"OFF"** position.

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

NOTE: **FOR YOUR PROTECTION** The fryer station is furnished with a hi-limit safety shutoff that will disengage the control if the frying compound temperature in the frypot would ever exceed 415°F (213°C). The **LED** will display **"Hi"**, the heat will shut off, the timer will be cancelled, and a constant alarm will sound. In this event, allow the frying compound temperature to drop below 415°F (213°C). Open the front access door and press the **OIL HI-LIMIT RESET** button for a period of 3-seconds to restart the control.

OPERATION

CLEANING & MAINTENANCE

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

THOROUGHLY CLEAN DAILY

The cleanliness and appearance of this unit will contribute considerably to operating efficiency and savory, appetizing food. Good equipment kept clean works better and lasts longer.

1. Disconnect unit from power source, and let cool.
2. Remove all detachable items. Clean these items separately with a good grease solvent or commercial detergent. Rinse well and dry.
3. Clean control panel, door vents, door handles, and door gaskets thoroughly since these areas harbor food debris. Rinse by wiping with sponge and clean warm water. Wipe dry with a clean cloth.
4. To help maintain the protective film coating on polished stainless steel, clean the exterior of the unit with a cleaner recommended for stainless steel surfaces. Spray the cleaning agent on a clean cloth and wipe with the grain of the stainless steel.

NOTE: Avoid the use of abrasive cleaning, compounds, chloride based cleaners, or cleaners containing quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel.

Always follow appropriate state or local health (hygiene) regulations regarding all applicable cleaning and sanitation requirements for foodservice equipment.

DANGER

AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

⚠ CAUTION

TO PROTECT STAINLESS STEEL SURFACES, COMPLETELY AVOID THE USE OF ABRASIVE CLEANING COMPOUNDS, CHLORIDE BASED CLEANERS, OR CLEANERS CONTAINING QUATERNARY SALTS. NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL. NEVER USE WIRE BRUSHES, METAL SCOURING PADS OR SCRAPERS.

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

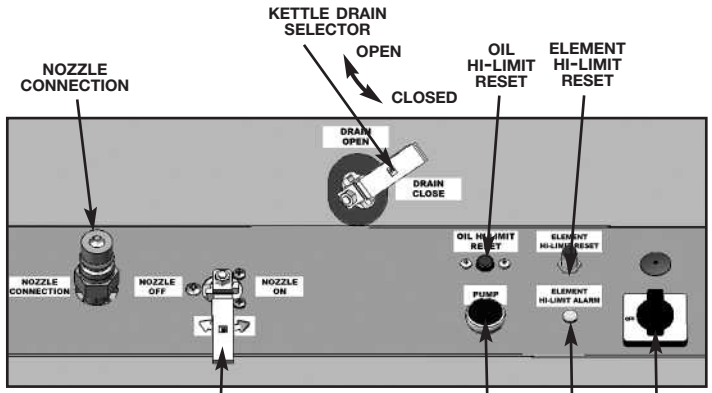
Careful observation of the finished food product will help determine optimal filtering frequency. Filtering the cooking oil at regular intervals will help ensure food quality.

FOR BEST RESULTS: Do not allow the temperature of the oil to decrease below the **"Idle Mode"** temperature of 250°F (121°C) when filtering. If filtering at the end of the day, pump oil back into the kettle while still hot. Do not allow oil to cool before returning to kettle.

CAUTION

OPERATORS MUST BE MADE AWARE OF THE HAZARDS INVOLVED IN THE OPERATION OF A HOT OIL FILTERING SYSTEM. ON-SITE SUPERVISION DURING THE FILTRATION PROCESS AND THE CLEANING PROCESS IS STRONGLY RECOMMENDED.

ASF-75E, 120V WITH FILTRATION



1. Open the front access door. With the Kettle/Nozzle selector in the **"KETTLE"** position, rotate the drain valve counterclock-wise until rotation stops and the drain valve is in the **"OPEN"** position. Power to the main control panel will automatically switch **"OFF."**
2. Allow contents of the fryer to completely drain.
3. Press the **PUMP "ON"** to allow the oil to circulate through the drain system to flush crumbs. Using the brushes provided, brush the sides and bottom of the fryer while the oil is circulating through the system. Use the angle brush under the heat exchangers.
4. Press the **PUMP "OFF"** and allow contents of the fryer to completely drain.
5. Rotate the drain valve clockwise to the **"CLOSED"** position.
6. Press the **PUMP "ON"** and allow the fryer to refill to the recommended level adding additional oil/shortening as required to maintain proper fill level.
7. After the frypot has completely refilled, pull out the mobile oil trolley and discard the filter into a proper receptacle. Clean the filter assembly and oil trolley, if needed.
8. Replace the oil filter and return the trolley to the proper position beneath the fryer.
9. Press and hold the **"ON/OFF"** key on the main control panel for 1-1/2 to 2 seconds to energize the fryer. Continue normal fryer operation after the preheat function has been completed.

CAUTION

METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

WARNING

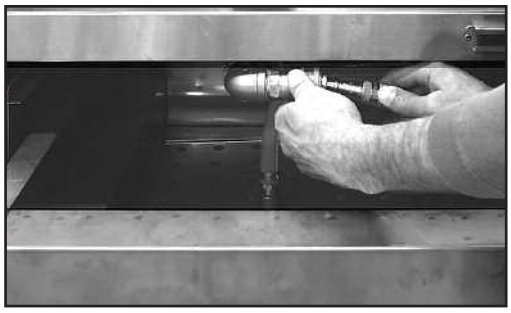
TO AVOID PERSONAL INJURY, USE CAUTION WHEN SURFACES BECOME SLIPPERY DUE TO SPILLED OR DRIPPING OIL.

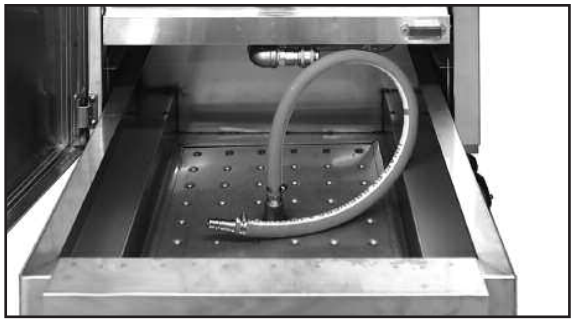
OPERATION

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

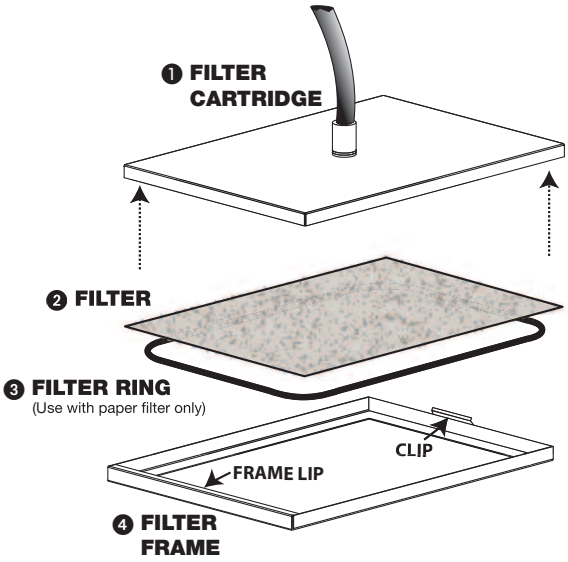
FILTER REPLACEMENT

1. With the **DRAIN** in the **"CLOSED"** position, pull the trolley from the fryer and disconnect the hose from the fryer.





2. Pushing down on filter frame ❸ clip, pull side of filter cartridge ❶ closest to clip upwards. Slide opposite edge of filter cartridge out from beneath the filter frame lip.
3. Remove and discard used filter ❷.
4. Place new filter next to screen on underside of filter cartridge ❶ and reverse step 2 above.
5. Reconnect hose to fryer and return trolley to the full position under the fryer.



STANDARD AND OPTIONAL FILTERS	
PART NO.	**DESCRIPTION**
FI-27791	PAPER (STANDARD WITH FRYER) 7-count package
FI-27794	PAPER (STANDARD WITH FRYER) 100-count package
FI-27648	CHARCOAL/CARBON FILTER 30-count pkg.
FI-27014	REUSABLE MESH FILTER, single

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

FILTER CLEANING & MAINTENANCE

NOTE: Make certain to use hand protection when working with hot surfaces.

REUSABLE MESH FILTER OPTION:

Clean the reusable mesh filter **(FI-27014)** by spraying thoroughly with hot water. **DO NOT** clean in the dishwasher. **DO NOT** use detergents to clean. Detergents and detergent residues will significantly reduce the life of oil and shortening products.

CAUTION

A WORN FILTER WILL AFFECT PRODUCT FRYING RESULTS.

Make certain the filter is performing efficiently by inspecting the filter each time it is cleaned. Examine for cuts and holes. For the best results, replace the filter whenever necessary.

CAUTION

TO PREVENT FILTER DAMAGE, DO NOT USE SHARP IMPLEMENTS TO REMOVE SCRAPS FROM THE FILTER.

Make certain the filter is securely fastened to the support basket before returning the assembly to the trolley.

To discard deteriorated oil/shortening, the trolley can be pulled from the fryer and can be rolled to a convenient location for use with a pumping device.

ALWAYS MAKE CERTAIN THE TROLLEY IS PROPERLY POSITIONED BENEATH THE FRYER BEFORE OPERATION.

WARNING

TO AVOID PERSONAL INJURY, USE CAUTION WHEN SURFACES BECOME SLIPPERY DUE TO SPILLED OR DRIPPING OIL.

CAUTION

METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

OPERATION

OIL FILTRATION INSTRUCTIONS (FOR UNITS WITH INSTALLED OPTION)

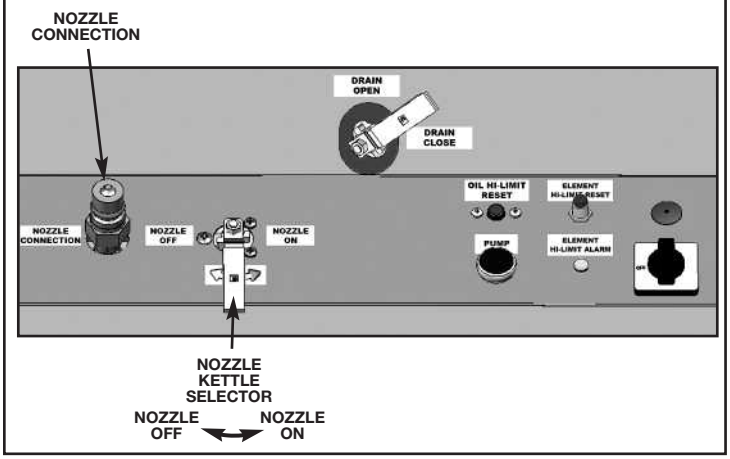
CLEANING & MAINTENANCE

OIL DISCARD HOSE OPTION:

The oil discard hose option (HO-27686) is available as an option to assist both the boil-out and filtration operation.

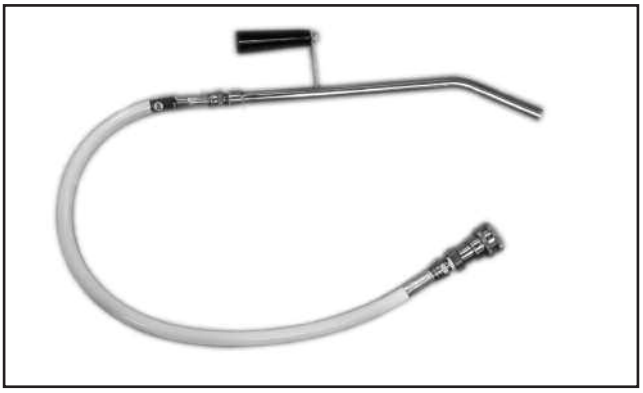
With the discard hose attached to the nozzle connection, place the Kettle/Nozzle selector in the **"NOZZLE"** position.

ASF-75E, 120V WITH FILTRATION



The drain can be placed in the **"OPEN"** or **"CLOSED"** position as required.

Disconnect hose following use and return the selector to the **"KETTLE"** position.



Nozzle will contain a small amount of oil after use. Dispose of properly.

DANGER

TO AVOID SERIOUS PERSONAL INJURY DO NOT STAND ON THE FRYER OR FRYER COVER. THE FRYER COVER IS DESIGNED TO HOLD A MAXIMUM OF 10-POUNDS (4,5 KG) OF WEIGHT.

ALL SUGGESTED FRYING TIMES ARE BASED ON A FULL LOAD OF PRODUCT

Remove ice crystals and ensure that food is dry before frying. Excessive water and ice can cause oil to splatter or overflow. Do not over fill the basket. Food needs to be surrounded by oil for best frying results.

SUGGESTED FRYING TIMES

	ITEM	MINUTES	TEMPERATURE	DISPLAY
PROGRAM KEYS	**1. Fries (FROZEN)**	**3:30**	**350°F (177°C)**	Fries
	2. Chicken Nuggets (FROZEN)	**3:30**	**350°F (177°C)**	Nuggets
	3. Fish, Breaded (FROZEN)	**4:30**	**350°F (177°C)**	Fish
	4. Chicken Pieces, Breaded (FRESH)	**17:00**	**340°F (171°C)**	Chicken
	5. PRODUCT A			ProductC
	6. PRODUCT B			ProductD

ITEM	MINUTES	TEMPERATURE
Appetizer	3:30	350°F (177°C)
Breaded Cauliflower	3:30	340°F (171°C)
Breaded Fish	Per pkg. instructions	340°F (171°C)
Breaded Mac & Cheese	3:30	340°F (171°C)
Breaded Mushrooms	3:30	340°F (171°C)
Broccoli Cheese Nuggets	2:30	350°F (177°C)
Cheese Cake, Fried	8:30	350°F (177°C)
Cheese Nuggets	1:30	350°F (177°C)
Chicken Breasts (FRESH)	12:00-17:00	315°F (171°C)
Chicken Breasts (FROZEN)	20:00	330°F (166°C)
Chicken Fried Steak	4:00	350°F (177°C)
Chicken Gizzards (FRESH)	3:30	350°F (177°C)
Chicken, Legs & Wings (FRESH)	12:00-17:00	315°F (171°C)
Chicken Legs (FROZEN)	18:00	330°F (166°C)
Chicken, Patty	6:00	350°F (177°C)
Chicken Pieces - MRB (FROZEN)	17:00	340°F (171°C)
Chicken Strips	6:00	340°F (171°C)
Chicken Tenderloins (FRESH)	3:00	350°F (177°C)
Chicken Tenders, Breaded (FROZEN)	3:30	350°F (177°C)
Chicken Wings (FRESH)	3:30	350°F (177°C)
Chicken Wings (FROZEN)	15:00	330°F (177°C)
Clam Strips	2:00	340°F (171°C)
Corn Dogs	10:00	350°F (177°C)
Cream Cheese Jalapeño Poppers	3:30	340°F (171°C)

THE TIMES AND TEMPERATURES ARE SUGGESTED GUIDELINES ONLY. ALL COOKING SHOULD BE BASED ON INTERNAL PRODUCT TEMPERATURES. DUE TO VARIATIONS IN PRODUCT QUALITY, WEIGHT, AND DESIRED DEGREE OF DONENESS, THE COOKING TIMES AND TEMPERATURES MAY NEED TO BE ADJUSTED ACCORDINGLY. ALWAYS FOLLOW LOCAL HEALTH (HYGIENE) REGULATIONS FOR ALL INTERNAL TEMPERATURE REQUIREMENTS.

ALL SUGGESTED FRYING TIMES ARE BASED ON A FULL LOAD OF PRODUCT

Remove ice crystals and ensure that food is dry before frying. Excessive water and ice can cause oil to splatter or overflow. Do not over fill the basket. Food needs to be surrounded by oil for best frying results.

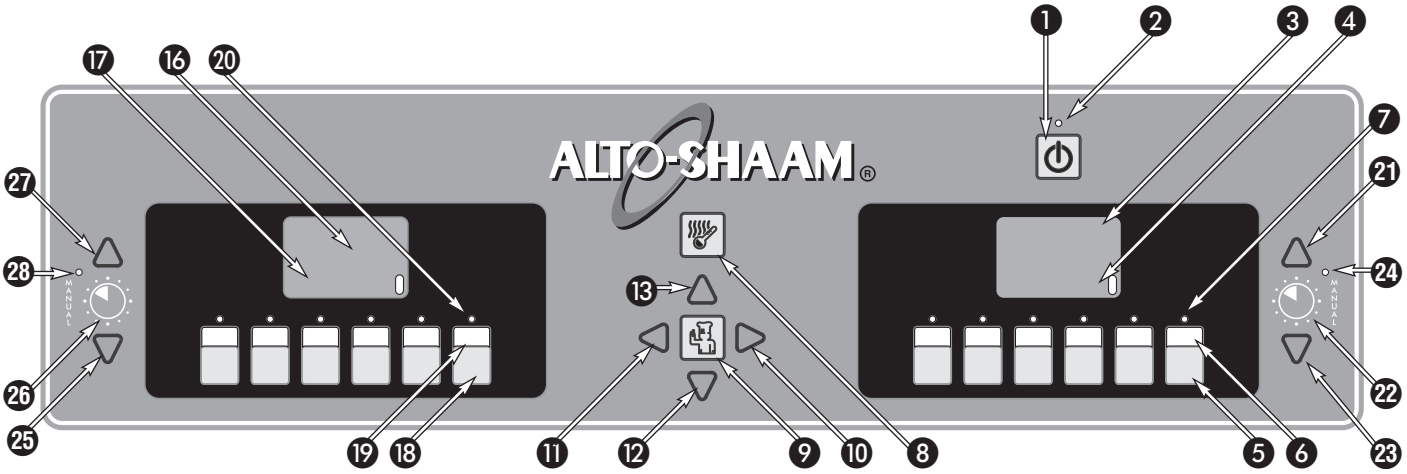
SUGGESTED FRYING TIMES

ITEM	MINUTES	TEMPERATURE
Eggplant	4:00	340°F (171°C)
Egg Rolls (FROZEN)	5:00	340°F (171°C)
Fries, Crinkle-Cut	5:00	340°F (171°C)
Fries, Seasoned	4:00	340°F (171°C)
Fries, Sour Cream & Chive	4:00	340°F (171°C)
Fries (FRESH)	5:00	340°F (171°C)
Fries, Thin Cut	3:30	340°F (171°C)
Hash Brown Circles	4:00	340°F (171°C)
Jalapeno Peppers, Stuffed	4:00	350°F (177°C)
Mozzarella Sticks, Battered or Breaded	Per pkg. instructions	340°F (171°C)
Mushrooms, Breaded	3:30	350°F (177°C)
Onion Rings	3:00	340°F (171°C)
Pork Chops (FRESH)	10:00	340°F (171°C)
Pork (FRESH)	12:00	340°F (171°C)
Potato Chips (fresh)	2:45	325°F (163°C)
Potato Wedges	3:00	350°F (177°C)
Quesadilla Rolls	3:30	350°F (177°C)
Shrimp	3:30	340°F (171°C)
Vegetables	3:00	350°F (177°C)
Zucchini, Breaded (FRESH)	3:30	350°F (177°C)

THE TIMES AND TEMPERATURES ARE SUGGESTED GUIDELINES ONLY. ALL COOKING SHOULD BE BASED ON INTERNAL PRODUCT TEMPERATURES. DUE TO VARIATIONS IN PRODUCT QUALITY, WEIGHT, AND DESIRED DEGREE OF DONENESS, THE COOKING TIMES AND TEMPERATURES MAY NEED TO BE ADJUSTED ACCORDINGLY. ALWAYS FOLLOW LOCAL HEALTH (HYGIENE) REGULATIONS FOR ALL INTERNAL TEMPERATURE REQUIREMENTS.

DELUXE CONTROL OPERATION

PANEL IDENTIFICATION



DUAL CONTROL PANEL IDENTIFICATION	
1. POWER ***ON*** KEY	15. —
2. POWER ***ON*** INDICATOR LIGHT	16. L.E.D. 4-DIGIT DISPLAY
3. L.E.D. 4-DIGIT DISPLAY	17. ALPHA/NUMERIC DISPLAY
4. ALPHA/NUMERIC DISPLAY	18. PROGRAMMED PRODUCT KEYS (6)
5. PROGRAMMED PRODUCT KEYS (6)	19. PROGRAMMED PRODUCT WINDOWS (6)
6. PROGRAMMED PRODUCT WINDOWS (6)	20. PROGRAMMED PRODUCT INDICATOR LIGHTS
7. PROGRAMMED PRODUCT INDICATOR LIGHTS	21. MANUAL OPERATION UP ARROW KEY
8. TEMPERATURE KEY	22. MANUAL OPERATION TIME KEY
9. PROGRAMMING KEY	23. MANUAL OPERATION DOWN KEY
10. RIGHT ARROW KEY	24. INDICATOR LIGHT
11. LEFT ARROW KEY	25. MANUAL OPERATION DOWN KEY
12. DOWN ARROW KEY	26. MANUAL OPERATION TIME KEY
13. UP ARROW KEY	27. MANUAL OPERATION UP ARROW KEY
14. —	28. INDICATOR LIGHT

CAUTION

METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

DELUXE CONTROL OPERATION

PROGRAMMED PRODUCT KEY OPERATION

1. TURN THE POWER SWITCH LOCATED BEHIND THE LOWER FRONT ACCESS DOOR TO THE "ON" POSITION.

Press the **HI-LIMIT RESET** button.

- The **HI-LIMIT ALARM** light will go out.
- Both LED displays on the control panel will indicate **OFF**.

2.

Press and hold the **ON/OFF** key for 1-1/2 to 2 seconds to energize the fryer. The indicator light within the display will illuminate to signify that the control is cycling the heaters to reach the set-point.

➪The following will appear in the alpha/numeric display:

"MELTCYC"

The fryer will start the melt-cycle mode. This is the required mode necessary for melting solid shortening within the frypot. The fryer will generate **ON/OFF** heating cycles and will remain in this mode until 180°F (82°C) is reached or the mode is manually bypassed.

FOR USE WITH LIQUID SHORTENING, PRESS THE TEMPERATURE KEY FOR 4 SECONDS TO BYPASS THE MELT CYCLE.

"PREHEAT"

Preheat will appear in the display and the fryer will generate a continuous heating cycle until it reaches the operator pre-programmed set-point or a default temperature of 350°F (177°C).

"READY"

When the frypot temperature is reached, **"READY,"** will appear in the Alpha/Numeric Display.

3. LOAD PRODUCT

Load product in basket(s) and set basket(s) in the fryer lift brackets. The basket(s) will automatically lower into the oil after the product key is pressed.

4.

Press and hold the desired **PROGRAMMED PRODUCT KEY** for 1 second.
➪The indicator light for the selected product key will illuminate.

The basket lift (ON LIFT EQUIPPED FRYERS ONLY) will lower the product into the cooking oil/shortening. The display will indicate the product name and the programmed cook time. The control will begin a countdown of the time.

CONTINUED

PROGRAMMED PRODUCT KEY OPERATION

5. If shake-time has been programmed into the selected product:

"SHAKE"

An alarm will sound during the cooking cycle at the specified shake-time programmed. **"SHAKE"** will appear in the display. The basket will automatically lift 50-percent and the display will count down from the shake time programmed.

After shaking the product, both the alarm and display can be cleared by pressing the selected product key. The basket will automatically lower into the cooking position and the cooking time will resume.

NOTE: This function will not occur if shake time has not been programmed into the selected product.

6. At the end of the cooking cycle...

"Done"

The basket(s) will lift (ON LIFT EQUIPPED FRYERS ONLY).
An alarm will sound.
The indicator light within the display will begin to flash.

If the control is set to "Continuous Alarm Mode," press the illuminated product key to silence alarm. If not set to "Continuous Alarm Mode," the alarm will stop in 5 seconds without user intervention and the display will revert to the 350°F (177°C) **"READY"** state if a hold value has not been programmed.

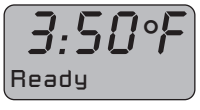
7. **"Hold Done"**

If a hold value has been entered into the cooking program, the control alarm will sound and the basket will automatically lift. The hold time will be displayed and countdown will begin. When the hold timer reaches 0, an alarm will sound and the product indicator light within the display will flash.

➪ Cancel the alarm by pressing the product key.

NOTE: If no hold value has been programmed, the control will skip to item 8.

8. **"READY"**



The control will revert to the ready state.
"READY," will appear in the Alpha/Numeric Display.
The 4-digit display will indicate the operator set temperature or the default set-point of 350°F (177°C).

DELUXE CONTROL OPERATION

MANUAL OPERATION

1. Press and hold the **ON/OFF** key for 1 second to energize the fryer.
➪The following will appear in the Alpha/Numeric Display:

"MELTCYC"

The fryer will start the melt-cycle mode. This is the required mode for melting solid shortening within the frypot. The fryer will generate **ON/OFF** heating cycles and will remain in this mode until 180°F (82°C) is reached or the mode is manually bypassed.

FOR USE WITH LIQUID SHORTENING, PRESS THE TEMPERATURE KEY FOR 4 SECONDS TO BYPASS THE MELT CYCLE.

"PREHEAT"

The fryer will generate a continuous heating cycle until it reaches the operator pre-programmed set-point or a default temperature of 350°F (177°C).

"READY"

When the frypot temperature is reached, **"READY"**, will appear in the Alpha/Numeric Display.

2. LOAD PRODUCT Load product in basket(s) and set basket(s) in the fryer lift brackets. The basket(s) will automatically lower into the oil after the correct amount of time has been entered and the manual time key is pressed.

3. Press the **"MANUAL TIME KEY"** when "**READY**" appears in the Alpha/Numeric Display.

The previously set time (IN MINUTES) or **"0:00"** will begin to flash in the display.

4. PRESS THE UP▲ AND DOWN▼ ARROW KEYS TO ADJUST THE AMOUNT OF TIME.

CONTINUED

MANUAL OPERATION

5. Press the **MANUAL TIME** key after the correct amount of time has been entered.

The fryer basket will automatically lower into the cooking shortening/oil. The displayed time will begin to count down the remaining time.

NOTE: To stop the manual cooking function before time has expired:

Press and hold the **MANUAL TIME** key for 1-second.

➪ The display will revert to **"0:00."**

The control will produce an audible signal.

The basket will automatically rise.

Manual has it's own set point. Use right/left arrow keys to adjust.

May be adjusted during cook cycle.

SHUTDOWN

1. Press and hold the **ON/OFF** key on the main control panel for 2 seconds.

The alpha/numeric will display **"OFF."**
The baskets will automatically lift.
The display will become blank.

2. Turn the Master Power Switch (located behind the front access door) to the **"OFF"** position.

DELUXE CONTROL OPERATION

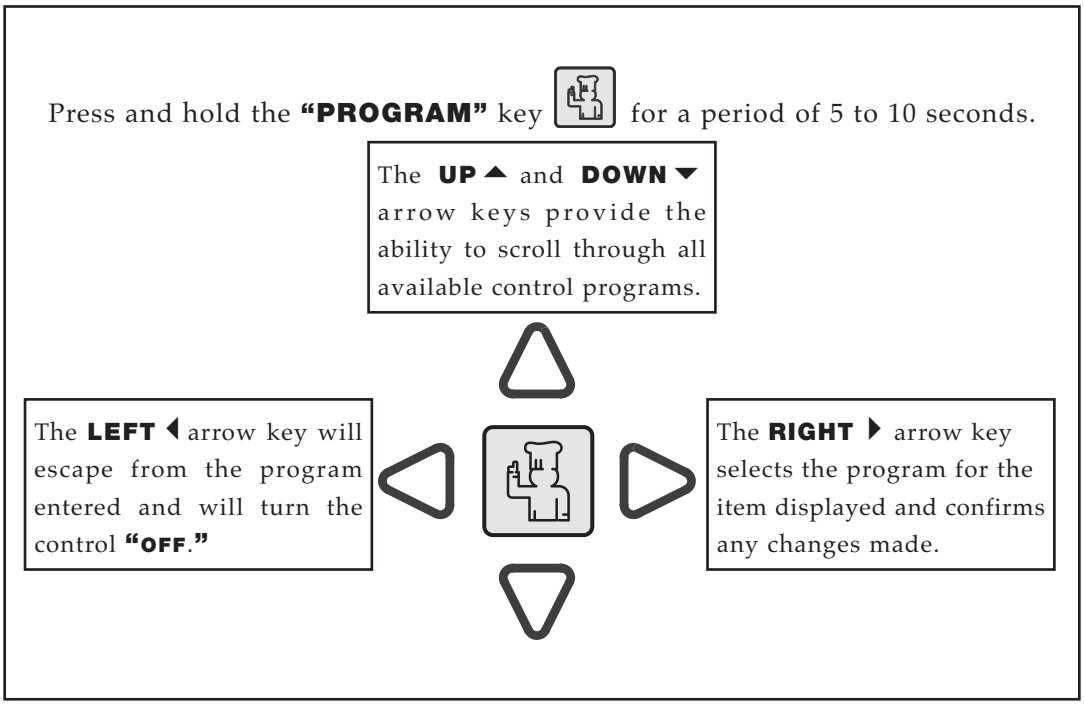
CONTROL PROGRAMMING OVERVIEW

Initial access to the programming mode must start with the control in the **OFF** position.

Entering the **"PROGRAM"** mode provides the operator with the ability to modify all control functions and provides access to the boil-out **"BOIL"** feature.

The fryer programming capability offers the following functions and features. Some of these operating parameters have been preset at the factory and are described in the control programming section:

"Boil"	**"Basket Lift"**	**"Language"**	**"IdleMode"**	**"Max Time"**	**"Hi Band"**
"Set-Point"	**"LiftSync"**	**"TempDisp"**	**"Filter"**	**"Hi Temp"**	**"Melt Ct"**
"Product"	**"Temp F-C"**	**"AlarmSet"**	**"Filter Cnt"**	**"Lo Band"**	**"Preheat Band"**


Press and hold the "PROGRAM" key for a period of 5 to 10 seconds.
The UP ▲ and DOWN ▼ arrow keys provide the ability to scroll through all available control programs.
The LEFT ◀ arrow key will escape from the program entered and will turn the control "OFF."
The RIGHT ▶ arrow key selects the program for the item displayed and confirms any changes made.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

PROGRAMMING THE CONTROL

Starting with the control in the **OFF** position, press and hold the **"PROGRAM"** key for a period of 5 to 10 seconds.

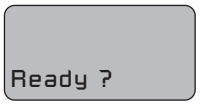
"Boil" will always appear as the first item in the display whenever the **"PROGRAM"** key is initially pressed. Detailed boil-out instructions are located on **PAGE 12** of this manual.

Press the DOWN ▼ arrow key to bypass the "Boil" program.

"Boil"

Press the right ▶ arrow key enter the **"Boil"** program **(SEE PAGE 12)**.

NOTE: Before entering this program, make certain the frypot is empty of all oil or shortening. Close the frypot drain. Carefully follow the manufacturer's mixing directions and fill the frypot with a mixture of cold water and fryer boil-out solution.



The display will indicate **"READY ?"**. Press the right ▶ arrow key to start the boil-out function. The boil-out solution will begin to heat to a temperature of 195°F (91°C). When the temperature has been reached, the display will begin a 10 minute countdown.

CAUTION

DO NOT LEAVE THE FRYER UNATTENDED DURING THE BOIL-OUT PROCESS. THE FRYER MUST BE CONTINUOUSLY MONITORED FOR BOIL-OVER CONDITIONS, PARTICULARLY IN HIGH-ALTITUDE LOCATIONS. IF BOIL-OVER IS IMMINENT, IMMEDIATELY TURN THE MASTER POWER SWITCH OFF AND ALLOW THE SOLUTION TO COOL. WHEN THE SOLUTION HAS COOLED, RE-ENTER THE BOIL-OUT MODE.

At the end of the boil-out period, an alarm will sound and the control will revert to the **OFF** state.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

DELUXE CONTROL OPERATION

PROGRAMMING THE CONTROL

This program allows the operator to change the temperature of the frypot oil/shortening. The set-point temperature of the oil/shortening can be adjusted from a range of 250°F to 450°F (121°C to 232°C). The factory default is set at 350°F (177°C).

Press the Up ▲ or Down ▼ arrow keys to scroll until **"SetPoint"** appears in the display. Press the right ▶ arrow key to enter the program. Display stops flashing. The previously set temperature will appear in the display. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the correct set-point appears, press the right ▶ arrow key to confirm the setting. Display flashes. Press the down ▼ arrow key to advance the control to the next program feature.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

PROGRAMMING THE CONTROL

"Product"

The fryer control has been preset at the factory with four product menu items and two programmable spaces in the dual control.

1. Fries 2. Nuggets 3. Fish 4. Chicken 5. PRODUCT A 6. PRODUCT B

The number of available product keys is directly linked to the **"LiftSync"** program that provides the ability to raise both baskets simultaneously or independently. If **"LiftSync"** is set in the **"ON"** position to raise both baskets at the same time, the **"Product"** function provides six available product keys for programming. If **"LiftSync"** is set to the **"OFF"** position to raise each basket independently, the **"Product"** control feature provides twelve available product keys for programming, six on each side of the control. When received from the factory **"LiftSync"** is set in the **"OFF"** position for independent basket operation.

NOTE: If **"LiftSync"** is to remain in the **"OFF"** position to provide independent basket operation for the purpose of frying two individual products simultaneously, the cooking temperature for each product must be the same. The fryer will use the higher temperature menu item.

The **"Product"** feature provides the operator with the ability to modify all presets and/or program additional product menu items as required.

Press the Up ▲ or Down ▼ arrow keys to scroll until **"Product"** appears in the display.

"Item"

The sub-menu provides the operator with the ability to rename an existing programmed product or add a program to one of the blank program keys, i.e., **PRODUCT A** or **PRODUCT B**.

CONTINUED

PROGRAMMING THE CONTROL

"Product"

"Item"

Press and hold any one of the twelve product keys to be programmed or modified.

The product, as currently named, will begin to flash in the display.

Press the Right ▶ arrow key. The first letter of the product name will begin to flash. Press the Up ▲ or Down ▼ arrow keys to scroll until the first letter changes as required (**UPPER CASE, LOWER CASE, NUMBERS, OR BLANK SPACE IS AVAILABLE THROUGH THE SCROLLING PROCESS**). Press the Right ▶ arrow key. The second letter of the product name will begin to flash. Press the Up ▲ or Down ▼ arrow keys to scroll until the second letter is changed as required. Continue this process until the desired name appears. **NOTE: There are 8 spaces available for the product name. ALL 8 spaces must be filled with a letter, number or blank space to complete the setting.**

When the correct name is displayed, press the Left ▶ arrow key to confirm the selection. The named product will start flashing. Display flashes. Press the Up ▲ or Down ▼ arrow key to advance the control to the next setting option for this product as directed on the following pages:

Time Mod *Cook Time* *SetPoint* *ShakeTime* *Hold Time*

Entry into the Product programming mode allows the operator to program all available product keys. To continue programming additional items, press and hold the next product key to be programmed and follow the above instructions.

After the final **"Product"** key has been programmed, the **LEFT** ◀ arrow key must be pressed to completely exit the control programming mode. The control will revert to the **"OFF"** position. To program control features other than **PRODUCT,** press and hold the **"PROGRAM"** key for a period of 5 to 10 seconds from the **"OFF"** position.

Press the Up ▲ or Down ▼ arrow keys and scroll to the program function to be set.

PROGRAMMING THE CONTROL

"Product"

"TimeMod"

This sub-menu allows the operator to compensate for any drop in oil/shortening temperature as it relates to cooking start time. In the **"ON"** position, the product countdown timer will not start until the oil temperature reaches the set-point temperature. In the **"OFF"** position, the product countdown timer will start as soon as the product key is pressed. This item is set to **"OFF"** at the factory.

Press the right ▶ arrow key to select **"TimeMod."** Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to scroll to the value of **"ON"** or **"OFF."** When the correct value is displayed, press the right ▶ arrow key to confirm the setting. Display flashes. Press the down ▼ arrow key to advance the control to the next setting option.

"CookTime"

This sub-menu allows the operator to adjust a previously programmed cooking time as determined by the operator or as shown on the product chart. The control provides frying time adjustment up to a period of 60 minutes.

Press the right ▶ arrow key to select **"CookTime."** The previously set programmed cook time or **"0000"** will appear in the display. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the correct time appears, press the right ▶ arrow key to confirm the setting. Display flashes.

Press the down ▼ arrow key to advance the control to the next setting option.

"SetPoint"

This sub-menu allows the operator to adjust the temperature of the fry-pot oil/shortening as required from the temperatures shown on the product chart. The set-point temperature of the oil/shortening can be adjusted from a range of 250°F to 450°F (121°C to 232°C).

Press the right ▶ arrow key to enter the program. Display stops flashing. The previously set temperature will appear in the display. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the correct set-point appears, press the right ▶ arrow key to confirm the setting. Display flashes. Press the down ▼ arrow key to advance the control to the next setting.

PROGRAMMING THE CONTROL

"Product"

"ShakTime"

The **"ShakTime"** sub-menu provides the operator with a programmed time period during which the baskets will automatically lift to half the normal raised position so that the operator can shake each basket. When programmed into a product procedure, an alarm will sound to alert the operator at the start of the **"ShakTime"** cycle and will continue until the activated product key is pressed. The amount of **"ShakTime"** can only be programmed up to the maximum amount of frying time allotted to the programmed product.

There is no **"ShakTime"** programmed into any of the products shown on the product chart. The control provides shake time adjustment from **"OFF"** up to a period of 60 minutes. When received from the factory, shake-time will indicate **"OFF"** in the display for all programmed preset items.

Press the right ▶ arrow key to enter the **"ShakTime"** sub-menu. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the desired amount of **"ShakTime"** appears, press the right ▶ arrow key to confirm the setting. If no shake time is required, press the Down ▼ arrow key and scroll until **"OFF"** appears in the display. When the correct setting appears, press the right ▶ arrow key to confirm. Display flashes. Press the down ▼ arrow key to advance the control to the next sub-menu setting.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

PROGRAMMING THE CONTROL

"Product"

"HoldTime"

This sub-menu allows the operator to program a time interval to lift the basket(s) and allow the product to drain before signaling the end of the frying cycle. There is no **"HoldTime"** programmed into any of the products shown on the product chart. The control provides hold time adjustment from **"OFF"** up to a period of 60 minutes.

Press the right ▶ arrow key to enter the **"HoldTime"** sub-menu. Display stops flashing. The previously set hold time or **"OFF"** will appear in the display. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the correct **"HoldTime"** appears, press the Right ▶ arrow key to confirm the setting. If no hold time is required, press the Down ▼ arrow key and scroll until **"OFF"** appears in the display. When the correct setting appears, press the Right ▶ arrow key to confirm. Display flashes.

Entry into the Product programming mode allows the operator to program all available product keys. After the final **"Product"** key has been programmed, the **LEFT** ◀ arrow key must be pressed to completely exit the control programming mode. The control will revert to the **"OFF"** position.

To program control features other than *Product,* press and hold the **"PROGRAM"** key for a period of 5 to 10 seconds from the **"OFF"** position. Press the Up ▲ or Down ▼ arrow keys and scroll to the program function to be set.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

DELUXE CONTROL OPERATION

PROGRAMMING THE CONTROL

"BsktLift"

The Basket Lift program provides the operator with the ability to enable or disable the automatic basket lift function. In the **"ON"** position, the baskets will lift automatically as programmed in the selected product procedure. In the **"OFF"** position, both baskets will remain in the raised position until manually dropped by the operator. This function is set in the **"ON"** position as received from the factory. **IT IS STRONGLY RECOMMENDED THAT THE "BSKTLIFT" REMAIN AT THIS SETTING.** If it is ever necessary to transition from the disabled **"OFF"** position to the enabled **"ON"** position, the control display will indicate **"POWERDOWN"** requiring the operator to perform a control shutdown in order to synchronize the baskets with the revised state of the control.

Turn the Master Power Switch (located behind the front access door) to the **"OFF"** position.

Press the Up ▲ or Down ▼ arrow keys to scroll until **"BsktLift"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. The previous setting will appear in the display. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the correct setting appears, press the Right ▶ arrow key to confirm. Display flashes. Press the Down ▼ arrow key to advance the control to the next setting option.

"LiftSync"

AVAILABLE ON DUAL-CONTROL FRYERS ONLY. The **"LiftSync"** program provides the ability to raise both basket lifts simultaneously by selecting the **"ON"** position. The factory preset is in the **"OFF"** position for independent operation.

Press the Up ▲ or Down ▼ arrow keys to scroll until **"LiftSync"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. Press the Up ▲ and Down ▼ arrow keys to toggle between **"ON"** and **"OFF."** When the selection has been made, press the Right ▶ arrow key to to confirm the selection. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

"Temp F/C"

The temperature display can be shown in degrees Fahrenheit or Celsius.

Press the Up ▲ or Down ▼ arrow keys to scroll until **"Temp F/C"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. The current setting will appear in the display. Press the Up ▲ or Down ▼ arrow keys to toggle between **"F"** and **"C."** Press the Right ▶ arrow key to accept the desired selection. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

PROGRAMMING THE CONTROL

"Language"

The language option is only available in English **"ENG"** at this time.

"TempDisp"

The operator can choose to have the fryer oil temperature continuously shown in the display during a product cooking sequence by selecting **"ON"** or to a normal display sequence by selecting **"OFF."** The function is set to **"ON"** at the factory.

Press the Up ▲ or Down ▼ arrow keys to scroll until **"TempDisp"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. The current setting of **"ON"** or **"OFF"** will appear in the display. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the correct setting appears, press the Right ▶ arrow key to confirm the setting. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

"AlarmSet"

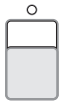
The operator is able to set the volume of the fryer alarm to off, low, medium or high **"OFF"**, **"LO"**, **"MED"** or **"HI."** The alarm is set to **"HI"** when received from the factory.

Press the Up ▲ or Down ▼ arrow keys to scroll until **"AlarmSet"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. The current setting will appear in the display. Press the Up ▲ or Down ▼ arrow keys to toggle among the available choices. When the correct setting appears, press the Right ▶ arrow key to confirm the setting. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

"IdleMode"

The idle mode allows the operator to set a period of time during which the fryer is not being used but still maintains full fryer oil temperature. When idle time expires, the fryer oil temperature will drop to 250°F (121°C) at which point the oil/shortening must be reheated before frying additional product. This time period can be adjusted between **"OFF"** and **60:00** minutes. **The factory default is set at 30 minutes idle time.**

Press the Up ▲ or Down ▼ arrow keys to scroll until **"IdleMode"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. If no idle time is required, press the Down ▼ arrow key until **"OFF"**appears in the display. Press the Up ▲ or Down ▼ arrow keys to change the setting. When the correct setting appears, press the Right ▶ arrow key to confirm. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.



"IdleMode" can be interrupted at any time by pressing any of the 12 product preset keys. The fryer will immediately begin to preheat to the set-point temperature. The baskets can be dropped only after the set-point temperature has been reached.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

DELUXE CONTROL OPERATION

PROGRAMMING THE CONTROL

"FILTER"

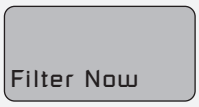
The filter program is a monitor to notify the operator to service the oil/shortening after a specified number of product loads established and set in the filter count **"FILTER CNT"** programming function. This feature is set to **"OFF"** at the factory. **THE NUMBER OF PRODUCT LOADS CAN BE ADJUSTED BY THE OPERATOR THROUGH THE FILTER COUNT PROGRAM. FILTER COUNT WILL AUTOMATICALLY ADJUST FILTER MONITOR ALERTS TO ONE OF THE THREE SELECTIONS SHOWN AS SET BY THE OPERATOR.**

"Off"

When set to the **"OFF"** position, the filter monitor is disabled and will **NOT** notify the operator to service the oil/shortening.

"ALRM"

Set to alarm **"ALRM,"** this feature will provide an audible alarm and the display will indicate "FILTER NOW" as a reminder to the operator after every 15 product loads or the number of processed fry loads set by the operator in the **"FILTER CNT"** program function. When set to **"ALRM"** additional fry loads can be processed and the alarm can be silenced by pressing the **ON/OFF** power key on the main control panel to the **"OFF"** position



"LocH"

When the program mode is changed to the lock **"LOCH"** position, an audible alarm will sound and the fryer will become inoperable following the number of processed fry loads set by the operator in the **"FILTER CNT"** program function. The control will only become operable after the oil/shortening has been serviced.

Press the Up ▲ or Down ▼ arrow keys to scroll until **"FILTER"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to toggle among the available choices. When the desired setting appears, press the Right ▶ arrow key to accept the selection. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

To exit the control programming mode at any time, press and hold the LEFT ◀ arrow key.

PROGRAMMING THE CONTROL

"FILTER CNT"

The filter count program allows the operator to change the number of processed fry loads within a range of 5 to 15 before the monitor notifies the operator to service the oil/shortening. The factory default is set at 15 loads. **THE "FILTER" MONITOR PROGRAM MUST BE ACTIVATED IN ORDER TO MAKE THE "FILTER CNT" PROGRAM FUNCTIONAL.**

Press the Up ▲ or Down ▼ arrow keys to scroll until **"FILTER CNT"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to until the desired number of processed loads appears in the display. When the desired setting appears, press the Right ▶ arrow key to accept the selection. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

"MAX TIME"

"MAX TIME" provides notification when the temperature of the oil is lower than the set-point temperature. The factory set default is 3 minutes and should not be adjusted by the operator. Press the down ▼ arrow key to advance the control to the next programming function.

"HI TEMP"

"HI TEMP" allows the operator to trigger an automatic fryer shut-down at a specified oil temperature within a range of 250°F to 450°F (121°C to 232°C). This safety feature is provided in the event the actual oil temperature exceeds the oil set-point temperature due to equipment malfunction. The factory default is set at 450°F (232°C).

Press the Up ▲ or Down ▼ arrow keys to scroll until **"HI TEMP"** appears in the display. Press the right ▶ arrow key to enter the program. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to scroll until the desired shut-down temperature appears in the display. When the desired temperature appears, press the right ▶ arrow key to accept the selection. Press the down ▼ arrow key to advance the control to the next programming function.

DELUXE CONTROL OPERATION

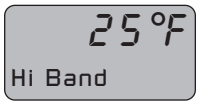
PROGRAMMING THE CONTROL

"LO BAND"

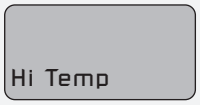
"LO BAND" provides an alarm notification when the temperature of the oil is lower than the set-point temperature. The adjustment range is between 5°F and 100°F (3°C and 56°C) with a factory preset of 21°F (12°C).

Press the Up ▲ or Down ▼ arrow keys to scroll until **"LO BAND"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to scroll until the desired number appears in the display. When the desired setting appears, press the Right ▶ arrow key to accept the selection. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

"HI BAND"

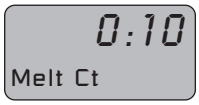


"HI BAND" provides an alarm notification when the temperature of the oil becomes higher than the set-point temperature. The adjustment range is between zero and 100°F (38°C) with a factory preset of 25°F (14°C).



Press the Up ▲ or Down ▼ arrow keys to scroll until **"HI BAND"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to scroll until the desired number appears in the display. When the desired setting appears, press the Right ▶ arrow key to accept the selection. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

"MELT CT"



The fryer control includes a melt function with **ON/OFF** pulsed heating cycles for the purpose of melting solid shortening at a continuous but slower rate to assure full melt-down. The operator has the ability to control the **ON/OFF** pulse rate between 00:01 and 00:60 seconds. The factory default is set for 10 seconds (00:10).

Press the Up ▲ or Down ▼ arrow keys to scroll until **"MELT CT"** appears in the display. Press the Right ▶ arrow key to enter the program. Display stops flashing. Press the Up ▲ or Down ▼ arrow keys to scroll until the desired time appears in the display. When the desired setting appears, press the Right ▶ arrow key to accept the selection. Display flashes. Press the Down ▼ arrow key to advance the control to the next programming function.

"PREHEAT BAND"

The **"PREHEAT BAND"** is used to prevent the oil temperature in the frypot from reaching the actual set-point temperature in order to compensate for temperature override as the fryer calls for heat. This program feature is set to 10°F (6°C) at the factory.
It is strongly urged that the "PREHEAT BAND" remain at this setting.

To exit the control programming mode, press and hold the LEFT ◀ arrow key.

TEMPERATURE VERIFICATION

The temperature of the cooking oil/shortening and the temperature set-point can be verified at any time.
Press the **"Temperature"** key **once** to verify the temperature of the oil/shortening.
Press the **"Temperature"** key **twice** to verify the set-point temperature.
The fryer control will automatically exit either of these readings after four (4) seconds.

If a defective probe is suspected, measure the temperature of the oil/shortening with a thermometer. Compare the thermometer reading with temperature shown in the control to make certain the readings are reasonably close. If there is a wide discrepancy, perform a complete fryer shutdown and contact Alto-Shaam service.

ERROR CODE DISPLAY MESSAGES	
PROBABLE CAUSE	SOLUTION
E-01 AMBIENT — Ambient temperature surrounding the controller is too high or too low.	Adjust the system or the environment so that the ambient air surrounding the control is above 32°F (0°C) or below 160°F (80°C).
E-02 DEFAULTS — Controller EEPROM initialization (FIRST TIME USE).	Wait for approximately 30 to 120 seconds. If the message does not terminate, return the controller to the factory.
E-10 FIXPROBE — Probe shorted.	Contact Alto-Shaam service.
E-20 FIXPROBE — Probe open.	Contact Alto-Shaam service.
E-30 LOWTEMP — Exceeded maximum amount of time to achieve temperature.	Turn power **OFF** and reset the control.
E-31 HITEMP — Exceeded set temperature by X degrees.	Turn power **OFF** and allow fryer to cool. Contact Alto-Shaam service.
E-86 SERVICE — Preset Data Error (EEPROM date error)	Contact Alto-Shaam service.
NOCOMMS SERVICE — Problem with connectors or cable.	Check ribbon cable from main board to slave board. Contact Alto-Shaam service.

DELUXE CONTROL OPERATION

1. Press and hold the **ON/OFF** key for 1 second.
➪One of the following will appear in the alpha/numeric display:

A. "**READY**" along with "**- - - -** " in the L.E.D. display.
The fryer is in the cooking range.
NOTE: For best results, do not cook product until the display is in this mode.

B. "**HI TEMP**"
The pot temperature is 40°F (4°C) or higher than the set-point.

C. "**LO TEMP**"
The pot temperature is 21°F (-6°C) or lower than the set-point.

D. "**PROBLEM**"
Indicates a heating problem.

E. "**HOT**"
The pot temperature is more than 410°F (210°C) or 395°F (202°C) for CE (European Community fryers).

F. "**FIXPROBE**"
The control has detected a problem in the temperature measuring circuit, including the probe.

NOTE: A decimal point "**▪** " between L.E.D. digits 1 and 2 in either display indicates the control is calling for heat.

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

CAUTION

THIS SECTION IS PROVIDED FOR THE ASSISTANCE OF QUALIFIED SERVICE TECHNICIANS ONLY AND IS NOT INTENDED FOR USE BY UNTRAINED OR UNAUTHORIZED SERVICE PERSONNEL.

CAUTION

IT IS RECOMMENDED THIS APPLIANCE BE INSPECTED BY A QUALIFIED SERVICE TECHNICIAN AT REGULAR INTERVALS AS PART OF A STANDARD KITCHEN MAINTENANCE PROGRAM.

EXTENDED LIMITED FRYPOT WARRANTY

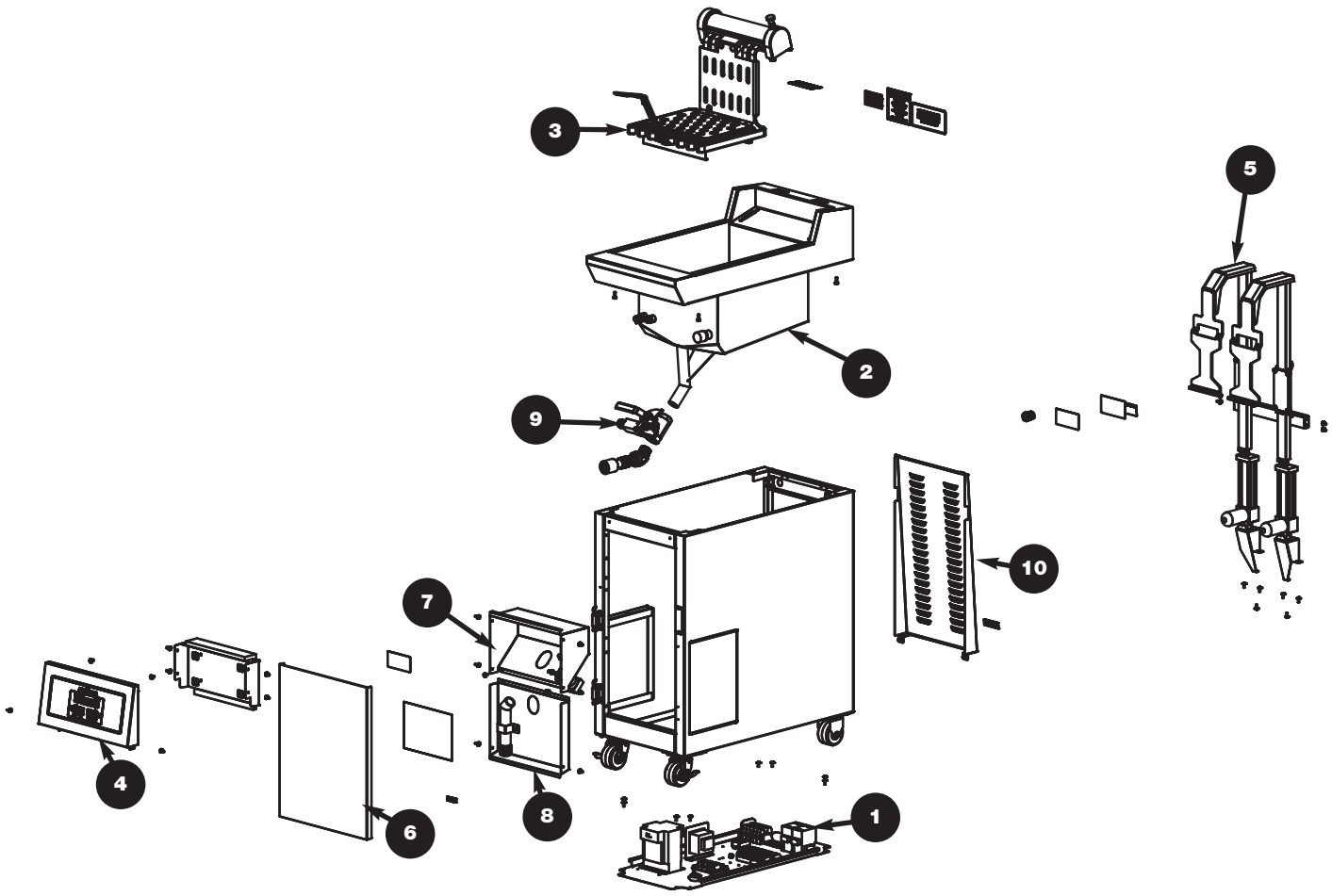
Alto-Shaam, Inc. warrants to the original purchaser that any frypot that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt frypot.

The labor warranty remains in effect for three (3) years from the shipping date. Alto-Shaam will bear shipping and normal labor charges for installation performed during standard business hours, and excluding overtime, holiday rates or any additional fees.

The parts warranty remains in effect for seven (7) years from the shipping date. Following the initial three (3) year labor warranty, Alto-Shaam will replace the frypot only, with freight, labor and all additional charges at the full responsibility of the owner/operator.

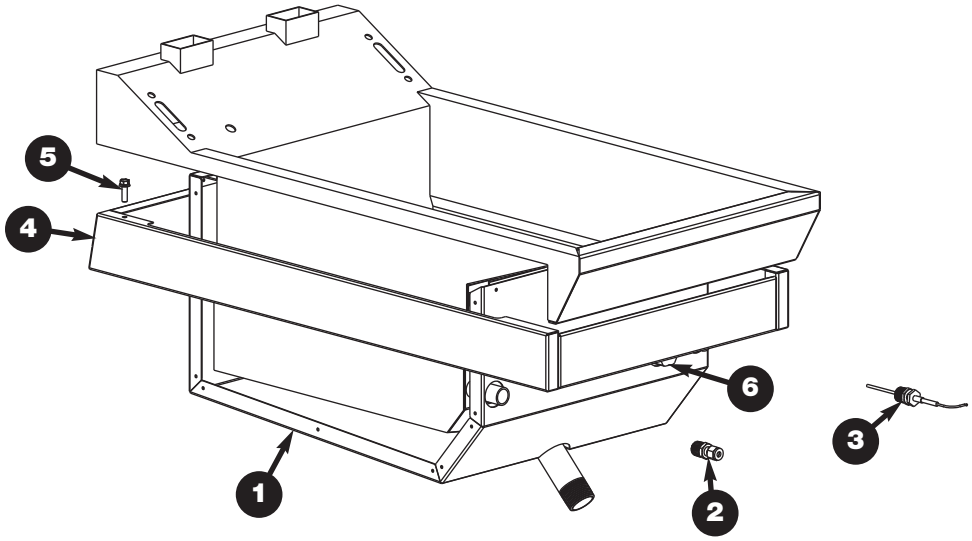
Extended frypot warranty coverage is subject to all remaining provisions as set forth in Alto-Shaam's standard published warranty.

ASF-60E WITH AUTOMATIC LIFTS



See details for these assemblies on following pages:

ITEM	PART NO	DESCRIPTION	QTY
1	5008682	ELECTRIC ASSY	1
2	5009111	KETTLE ASSY-ASF60E DLX W/LIFT	1
3	5008656	ELEMENTS ASSY-ASF60E 208-220V	1
4	5007811	CONTROL PANEL ASSEMBLY	1
5	5007518	LIFT ASSEMBLY-ASF-60	1
6	5007555	DOOR-ASF 60	1
7	5008570	DRAIN PANEL AND SWITCHES-60E	1
8	5008503	LOWER PANEL WITH DRAIN PIPE	1
9	5007792	VALVE-DRAIN ASSEMBLY ASF-60	1
10	1008458	PANEL-BACK	1

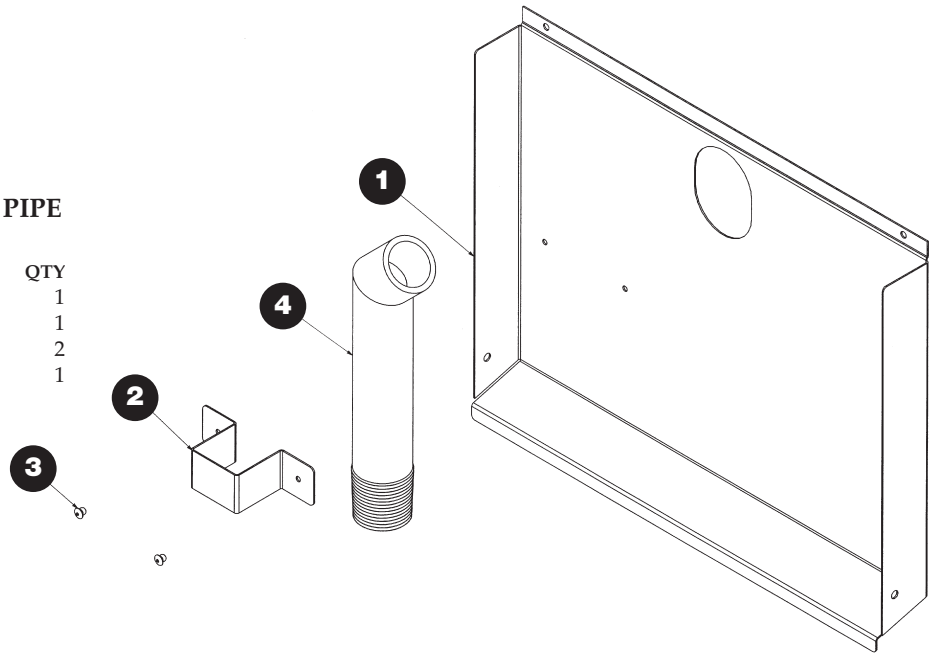


5009111 KETTLE ASSY

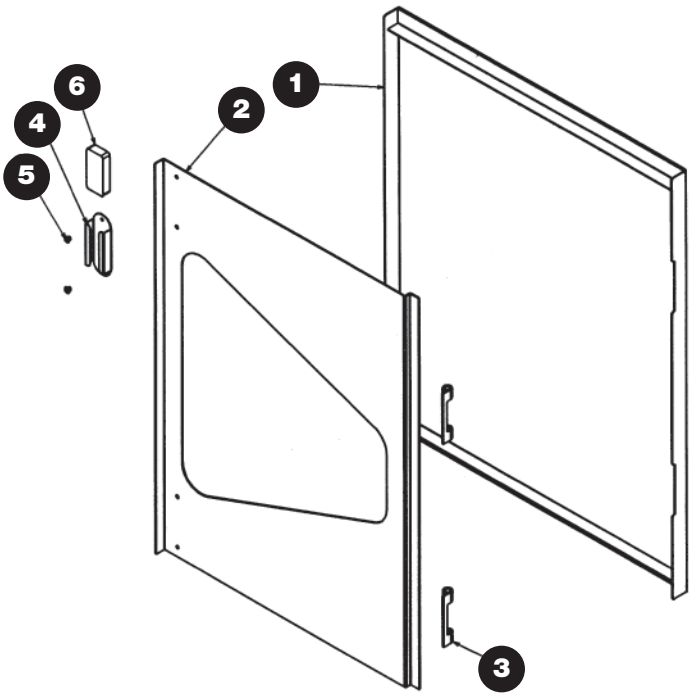
ITEM	PART NO	DESCRIPTION	QTY
1	KE-27824	KETTLE-KIREMKO	1
2	FT-27250	FITTING-1/4" COMPRESSION x 3/8 NPT	1
3	5005200	PROBE-REDUCER	1
4	5008865	FRAME	1
5	SC-24262	1/4-20 X 5/8″ SER FGD HD ZP	2
6	CP-28016	CAP-3/4 NPT	1

5008503 LOWER PANEL WITH DRAIN PIPE

ITEM	PART NO	DESCRIPTION	QTY
1	1009173	PANEL, LOWER	1
2	1009174	BRACKET-DRAIN HOLDER	1
3	RI-2097	#42 STAINLESS RIVET	2
4	PP-28126	PIPE – DRAIN	1



ASF-60E WITH AUTOMATIC LIFTS

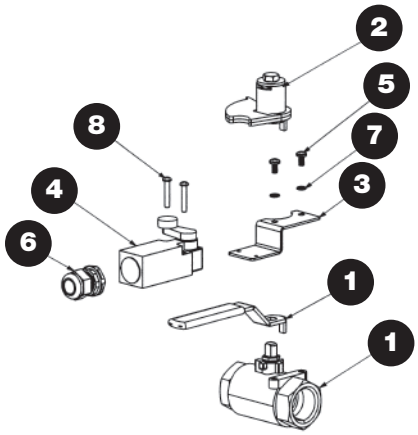


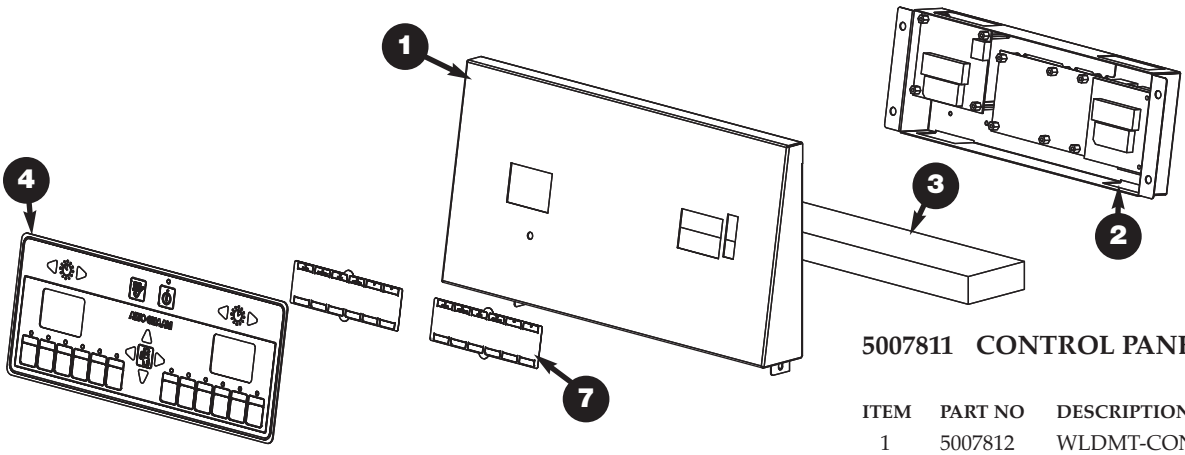
15007555 DOOR

ITEM	PART NO	DESCRIPTION	QTY
1	1008455	OUTER DOOR	1
2	1008462	INNER DOOR	1
3	HG-26994	HINGE, FEMALE, DOOR	2
4	1006303	BRACKET-MAGNET	1
5	RI-2097	#42 STAINLESS RIVET	2
6	MA-25734	MAGNET, DOOR, AR-7E	1

5007792 VALVE-DRAIN ASSEMBLY

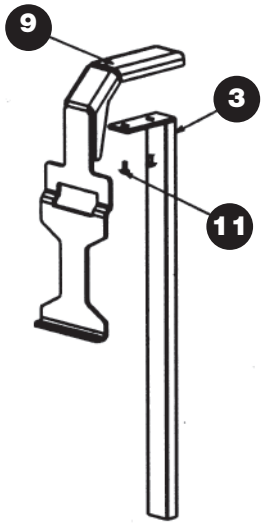
ITEM	PART NO	DESCRIPTION	QTY
1	VA-28114	VALVE-BALL USE WITH FT-28113	1
2	5008497	WLDMT-DRAIN CAM	1
3	1008739	BRACKET, DRAIN SWITCH MOUNT	1
4	SW-34246	LIMIT SWITCH	1
5	SC -28288	SCREW-10-24 x .375 PHMS	2
6	BU-3964	BUSHING, STRAIG HT, STRAIN RELIEF	1
7	WS-23671	WASHER, LOCK, #10, 18-8 S/S	2
8	SC -2069	SCREW, 8-32 X 1, NC PHILLIPS PAN	2





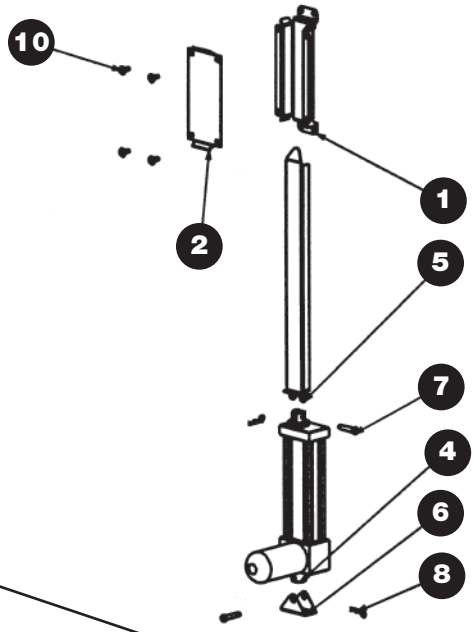
5007811 CONTROL PANEL ASSEMBLY

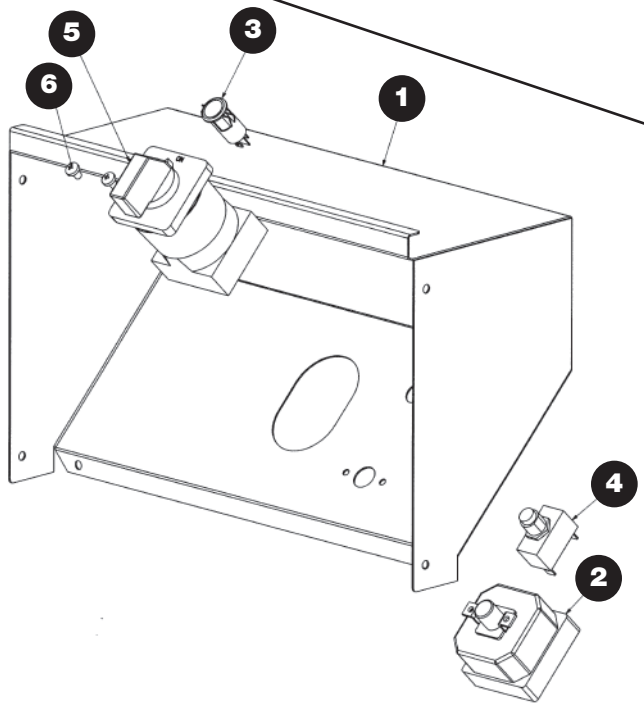
ITEM	PART NO	DESCRIPTION	QTY
1	5007812	WLDMT-CONTROL PANEL	1
2	5007396	CIRUIT BOARD ASSY	1
3	IN-22985	INSULATION	1
4	PE-28090	PANEL OVERLAY	1
5	WS-27045	LOCK WASHER, #8	1
6	NU-2296	NUT, HEX #8-32	4
7	PE-28110	INSERT-MENU CARD	2



5007518 LIFT ASSEMBLY-ASF-60

ITEM	PART NO	DESCRIPTION	QTY
1	1008420	GUIDE COLUMN	2
2	1008421	GUIDE SUPPORT	2
3	RD-28118	ROD, LIFT, WELD	2
4	MO-27011	MOTOR, LIFT	2
5	1008419	GUIDE PEN	2
6	1008418	BRACKET, LIFT MOTOR MOUNT	2
7	PI-27539	PIN, 1/4" X 1 1/4", CLEVIS	4
8	PI-27540	PIN, COTTER	4
9	HL-28117	WLDMT-BASKET LIFT	2
10	SC-2661	SCREW, 10-32 X1/2,NF PHIL TRUSS M/S,18-8 SS	24

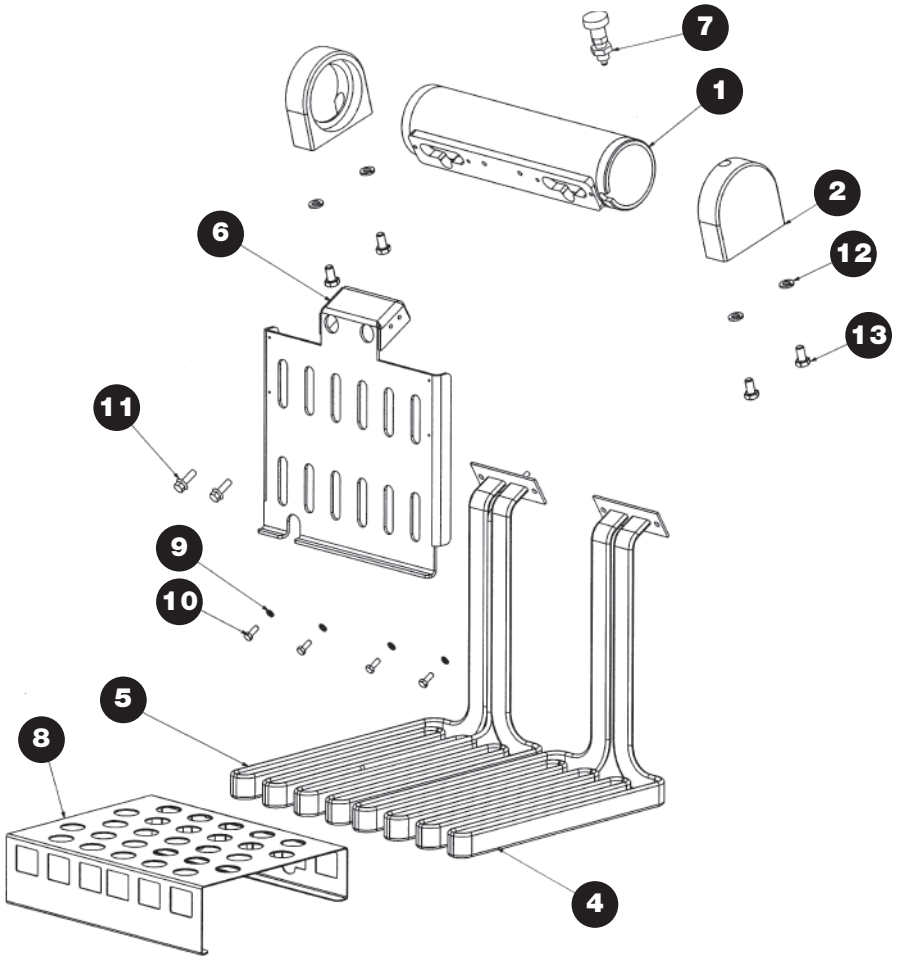




5008570 DRAIN PANEL AND SWITCHES

ITEM	PART NO	DESCRIPTION	QTY
1	1009268	PANEL, FRONT LOWER	1
2	TT-34245	THERMOSTAT, HI-LIMIT	1
3	LI-3951	WHITE PILOT LIGHT 250V	1
4	SW-33495	SWITCH-PUSH BUTTON SPST	1
5	SW-34254	SWITCH, CAM, FOR SINGLE PHASE	1
6	SC -22271	SCREWS, M4-0.7X6MM PHIL	2

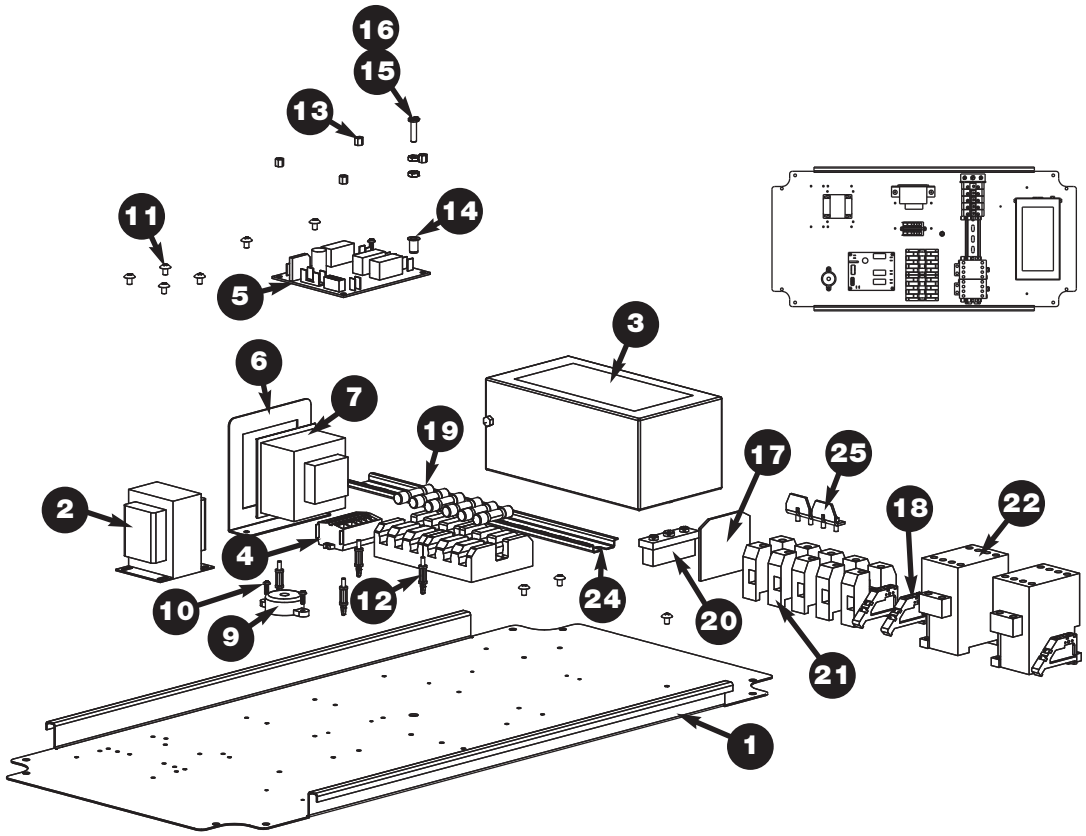
ASF-60E WITH AUTOMATIC LIFTS



5008656 ELEMENTS ASSY-ASF60E 208-220V

ITEM	PART NO	DESCRIPTION	QTY
1	PP-28143	PIPE, 2-1/2" SC H-40 304 SS	1
2	BK-27098	HINGE BLOCK WITH SECURITY PIN	1
3	BK-27099	HINGE BLOCK WITHOUT	1
4	EL-34352	ELEMENT 208-220V	1
5	EL-34387	ELEMENT 208-220V W/TC	1
6	1008527	GUARD, HEATER	1
7	PI-27152	PIN, SECURITY	1
8	1009262	ELEMENT GUARD	1
9	WS-23671	WASHER, LOCK, #10, 18-8 S/S	4
10	SC -27481	SCREW, 10-32 X 1/2" HEX HD, SS	4
11	SC -25286	1/4-20 X 3/4" FLANGED HD	2
12	WS-22303	M8 SPLIT RING WASHER	4
13	SC -26462	HEX HEAD SCREW, M8 X 15	4

ASF-60E WITH AUTOMATIC LIFTS

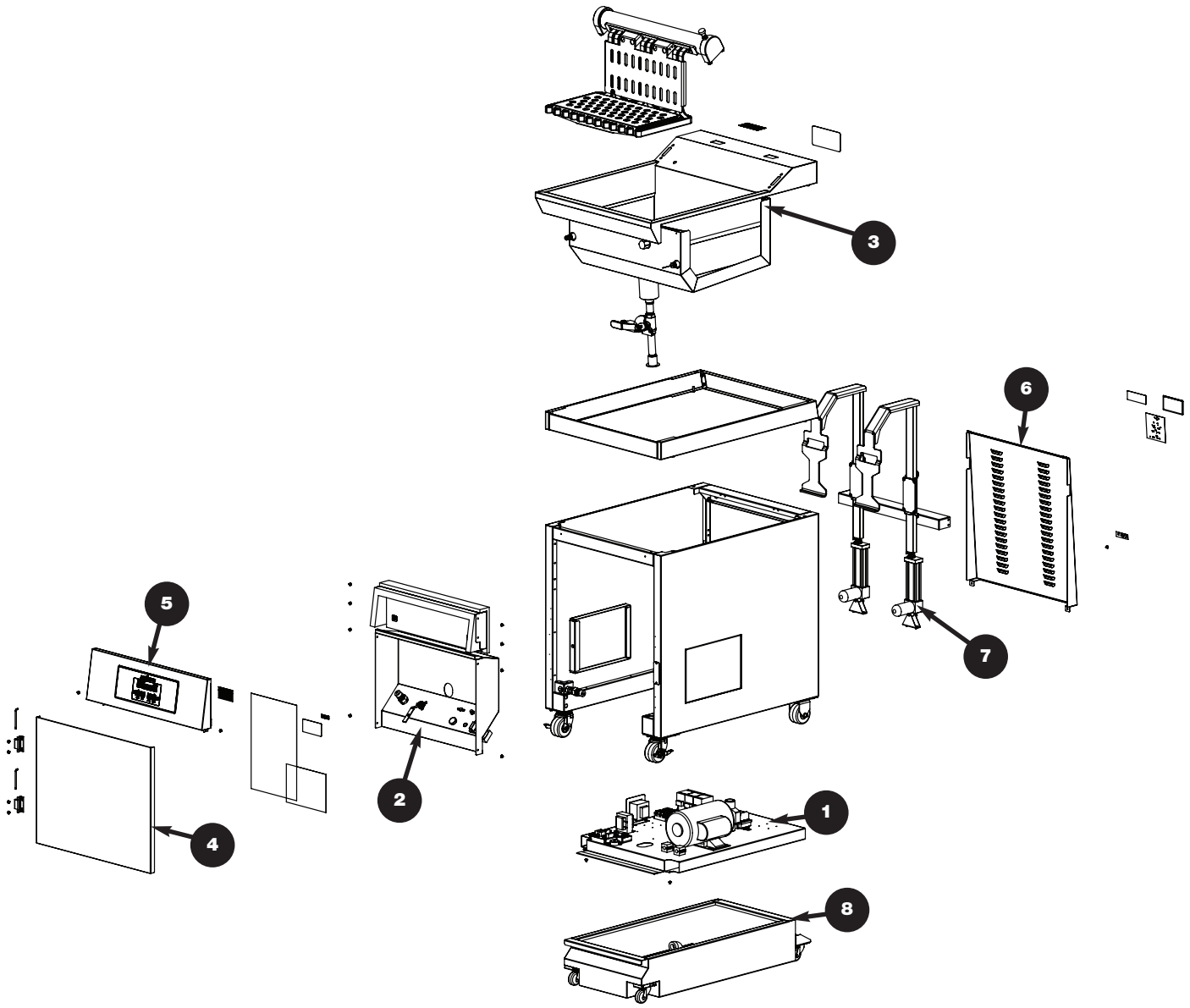


5008682 ELECTRIC ASSY 440-480

ITEM	PART NO	DESCRIPTION	QTY
1	1008453	BASE-ASF-60	1
2	TN-34402	TRANSFORMER, 230V/24V, 50A	1
3	TN-34401	TRANSFORMER, 440/480V	1
4	BK-34372	T-BLOCK, MODULAR	1
5	BA-34563	RELAY BOARD-ASF-DELUXE	1
6	1006917	BRACKET, HI-LIMIT CONTROLLER	1
7	CC-34378	CONTROLLER, HI-LIMIT,	1
8	5008119	WIRE SET-ASF 60E 440-480V NO LIFT	1
9	BP-3567	BEEPER	1
10	SC-23455	6-32 X 3/8 RD HD	4
11	SC-2459	8-32 x 1/4" PHIL SCREW	9
12	SP-33901	SPACER, 7/16 FOR .125 HOLE IN .062" BOARD	4
13	SP-33707	SPACER, SUPPORT, NYL, 1.4"	4
14	HG-22672	10-32 THREADED INSERT	1

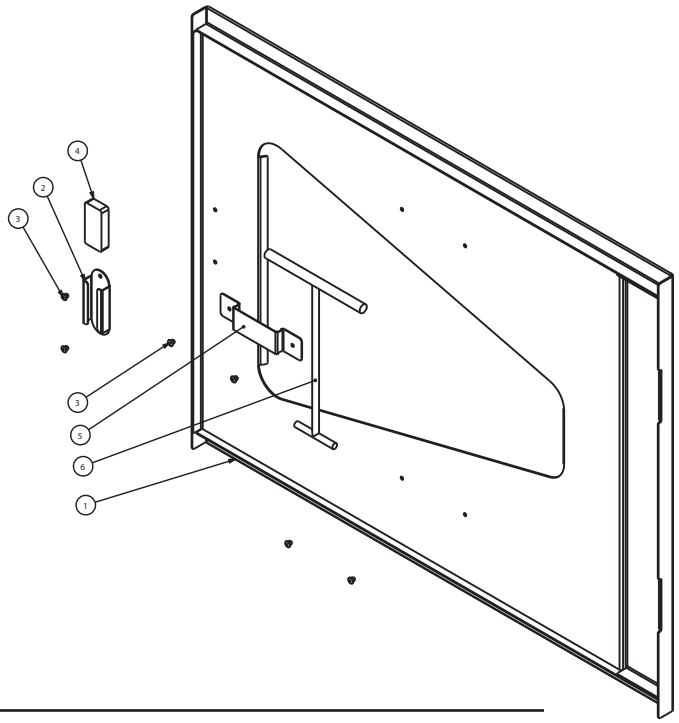
ITEM	PART NO	DESCRIPTION	QTY
15	NU-2215	NUT,10-32,NF HEX MS,# 18-8 S/S	2
16	SC-2071	10-32 X 3/4 PHILLIPS PAN HD	1
17	TM-3786	TERMINAL, CT, 35mm WALL, PART	1
18	TM-3926	TERMINALS,*CT,PLUG,6.10	3
19	FU-3860	FUSE-30 A, CLASS G, QC	6
20	TM-3782	TERMINAL, GROUND, 35mm	1
21	TM-3780	TERMINAL, CT, MARK, L	5
22	CN-3652	CONTACTOR	2
23	FU-3773	FUSE HOLDER	2
24	1003551	DIN RAIL-QC 12"	1
25	TM-33837	JUMPER STRIP	2
26	FU-34274	FUSE-4A SECONDARY, 3AG TYPE	1
27	FU-34355	FUSE-2A 250V, T-LAG, GLS, MOL	1
28	CR-3226	CONNECTOR,TERM.,# 10 STUD RING	1

ASF-75E, WITH FILTRATION & LIFTS



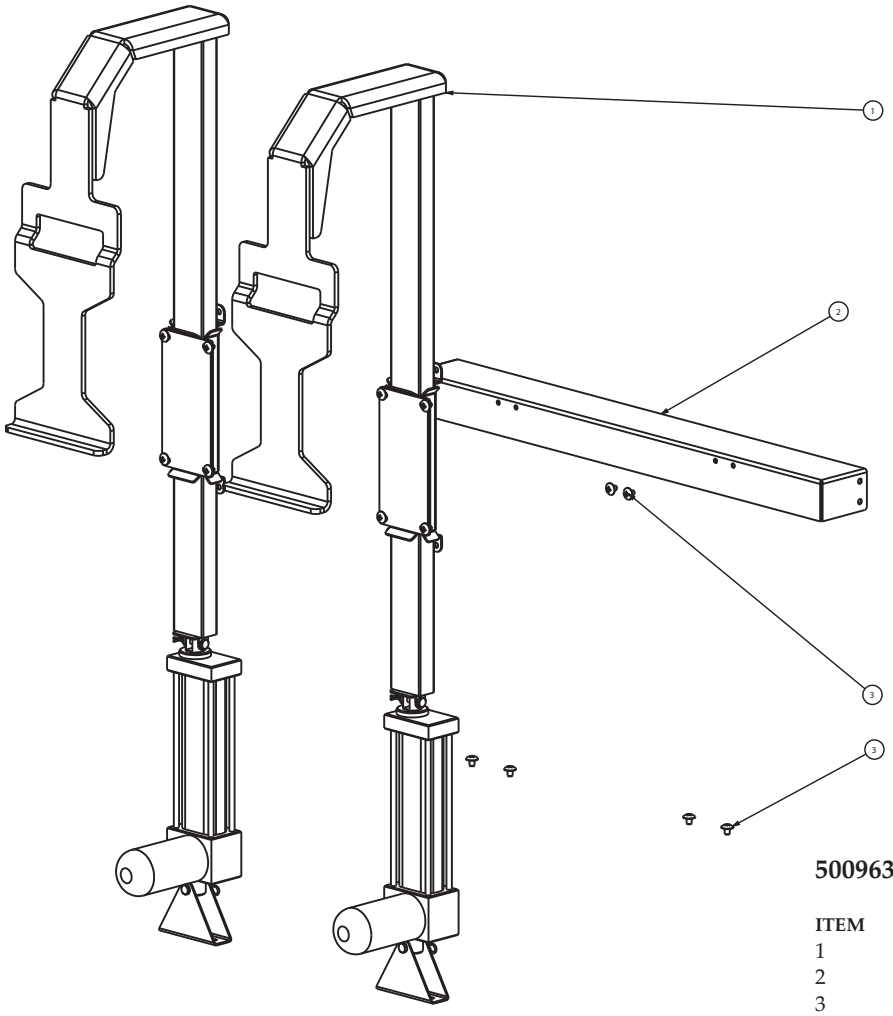
See details for these assemblies on following pages:

ITEM	PART NO	DESCRIPTION	QTY
1	5009735	MOUNT-MOTOR AND ELECTRICAL	1
2	5009636	PANEL, LOWER ASSY W/FILTRATION	1
3	5009628	KETTLE, 208-220	1
4	5009179	DOOR	1
5	5008595	CONTROL PANEL	1
6	1009361	BACK PANEL	1
7	5009630	LIFT ASSEMBLY	1
8	5008588	FAT DRAWER ASSEMBLY	1



5009179 **DOOR ASSEMBLY**

ITEM	PART NO	DESCRIPTION	QTY
1	5009177	DOOR	1
2	1006303	MAGNET BRACKET	1
3	RI-2097	#42 STAINLESS RIVET	6
4	MA-25734	DOOR MAGNET	1
5	1009689	ELEMENT LIFT BRACKET	1
6	RL-27690	ELEMENT LIFT	1



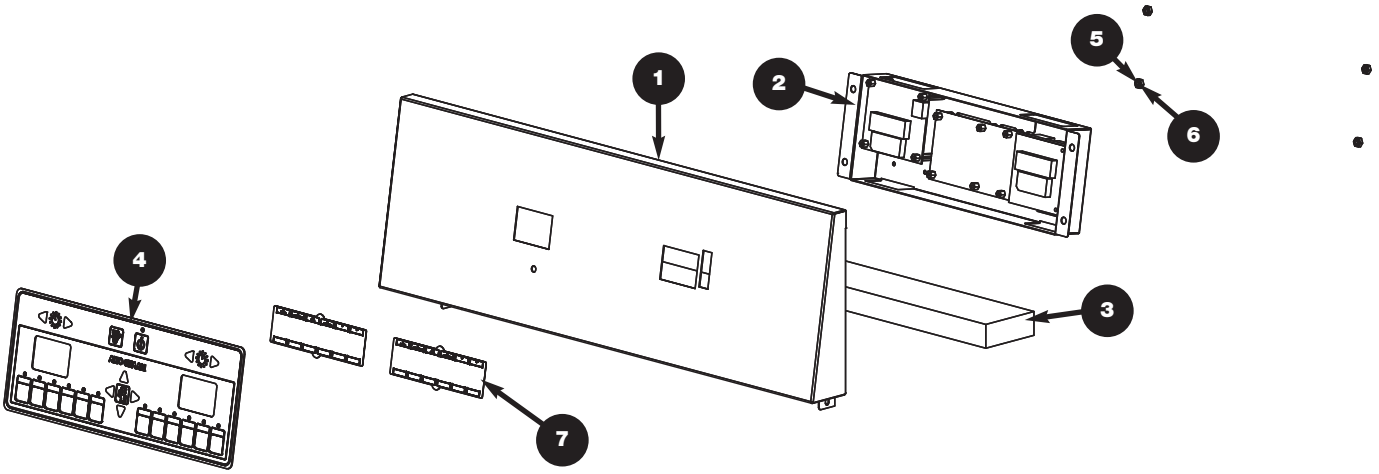
5009630 **LIFT ASSEMBLY**

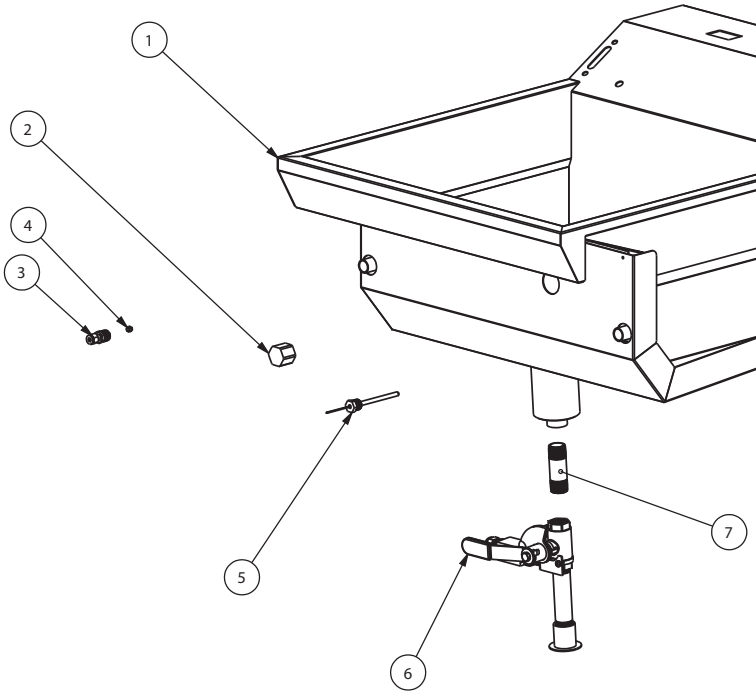
ITEM	PART NO	DESCRIPTION	QTY
1	5008597	SINGLE LIFT ASSEMBLY	2
2	1010240	BRACKET, LIFT SUPPORT	1
3	SC-26791	SCREW 10-32 X 1/4" PAN HEAD	8

ASF-75E, WITH FILTRATION & LIFTS

5008595 **CONTROL PANEL**

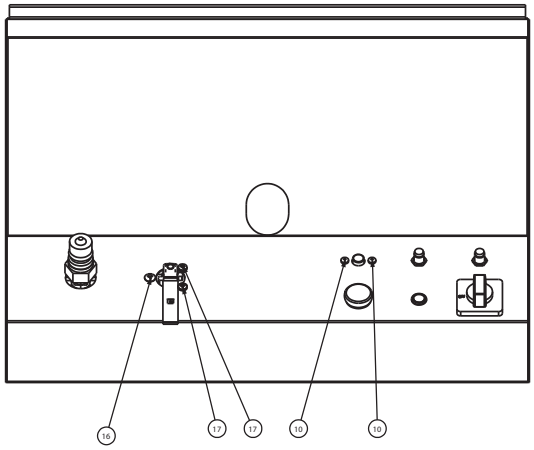
ITEM	PART NO	DESCRIPTION	QTY
1	5008594	WELDMENT-CONTROL PANEL	1
2	5007396	ASSY-CIRCUIT BOARD	1
3	IN-22985	INSULATION, 1/2" CERAMIC	1
4	PE-28090	MAIN OVERLAY-WATLOW	1
5	WS-27045	WASHER, # 8, LOCK WASHER	4
6	NU-2296	NUT, HEX # 8-32	4
7	PE-28110	INSERT-MENU CARD	2

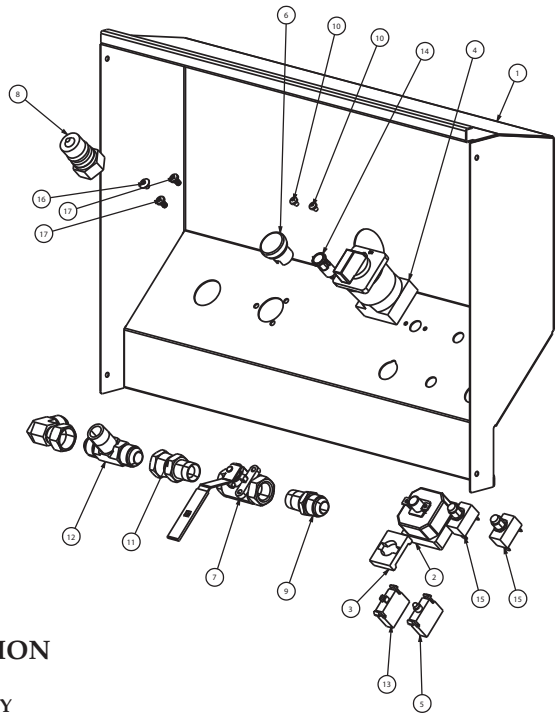




5009628 **KETTLE, 208-220**

ITEM	PART NO	DESCRIPTION	QTY
1	KE-27012	ASF-75E KETTLE ASSY.	1
2	CP-28016	CAP-3/4 NPT	1
3	FT-27250	FITTING-1/4" COMPRESSION	1
4	FT-27251	FERRULE, COMPRESSION, 6MM	1
5	PR-34483	PROBE-NTC THERMISTOR	1
6	5008473	DRAIN ASSEMBLY	1
7	NP-27402	PIPE NIPPLE, 3/4NPT X 10" LG	1

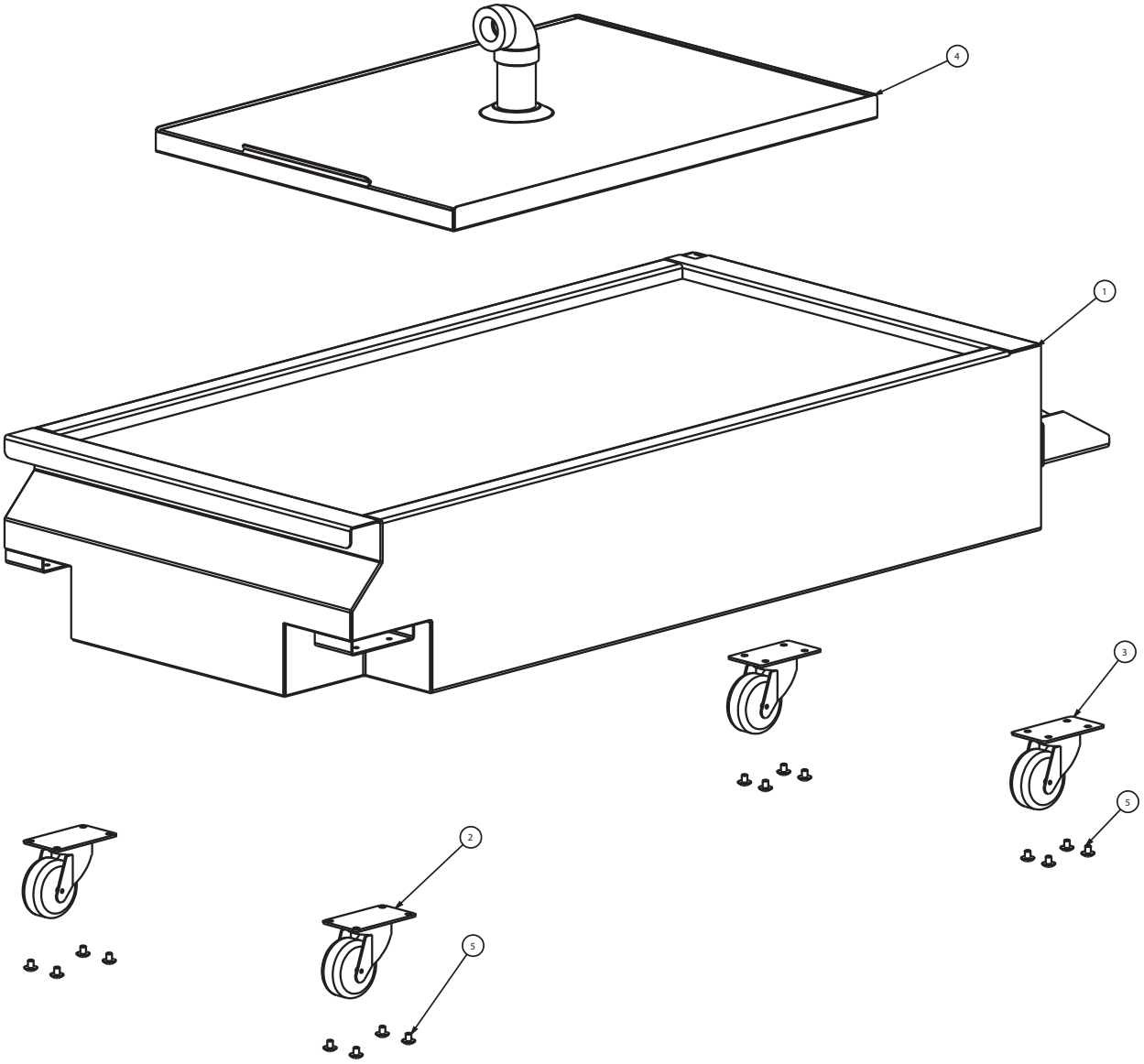




5009636 PANEL, LOWER ASSY W/ FILTRATION

ITEM	PART NO	DESCRIPTION	QTY
1	1009369	PANEL, FRONT LOWER	1
2	TT-34245	THERMOSTAT, HI-LIMIT	1
3	PA-27057	PLATE-LIGHT MOUNTING	1
4	SW-34254	SWITCH, CAM, FOR SINGLE PHASE	1
5	LI-34252	LIGHT PUMP, PUSH BUTTON	1
6	SW-34240	PUSH BUTTON SWITCH-PUMP	1
7	VA-28274	VALVE-BALL 1/2" NPT PANEL MOUNT	1
8	FT-28008	FITTING-1/2 NPT X ½ QUICK DISCT	1
9	FT-28275	FITTING-1/2-14 NPTF X 37° CONNECTOR	1
10	SC-22271	SCREWS, M4-0.7 X 6MM PHIL	2
11	FT-28661	FITTING-ADAPTER 37° TO NPTF	1
12	TE-28662	TEE-37° X 37° X NPTF	1
13	LI-34251	SWITCH-PUSH BUTTON	1
14	LI-3951	WHITE PILOT LIGHT 250V	1
15	SW-33495	SWITCH-PUSH BUTTON SPST	2
16	SC-26791	SCREW10-32 X 1/4" PAN HEAD	1
17	SC-28288	SCREW-10-24 X .375 PHMS	2
18	EB-28687	ELBOW-#1037° X 37°	1

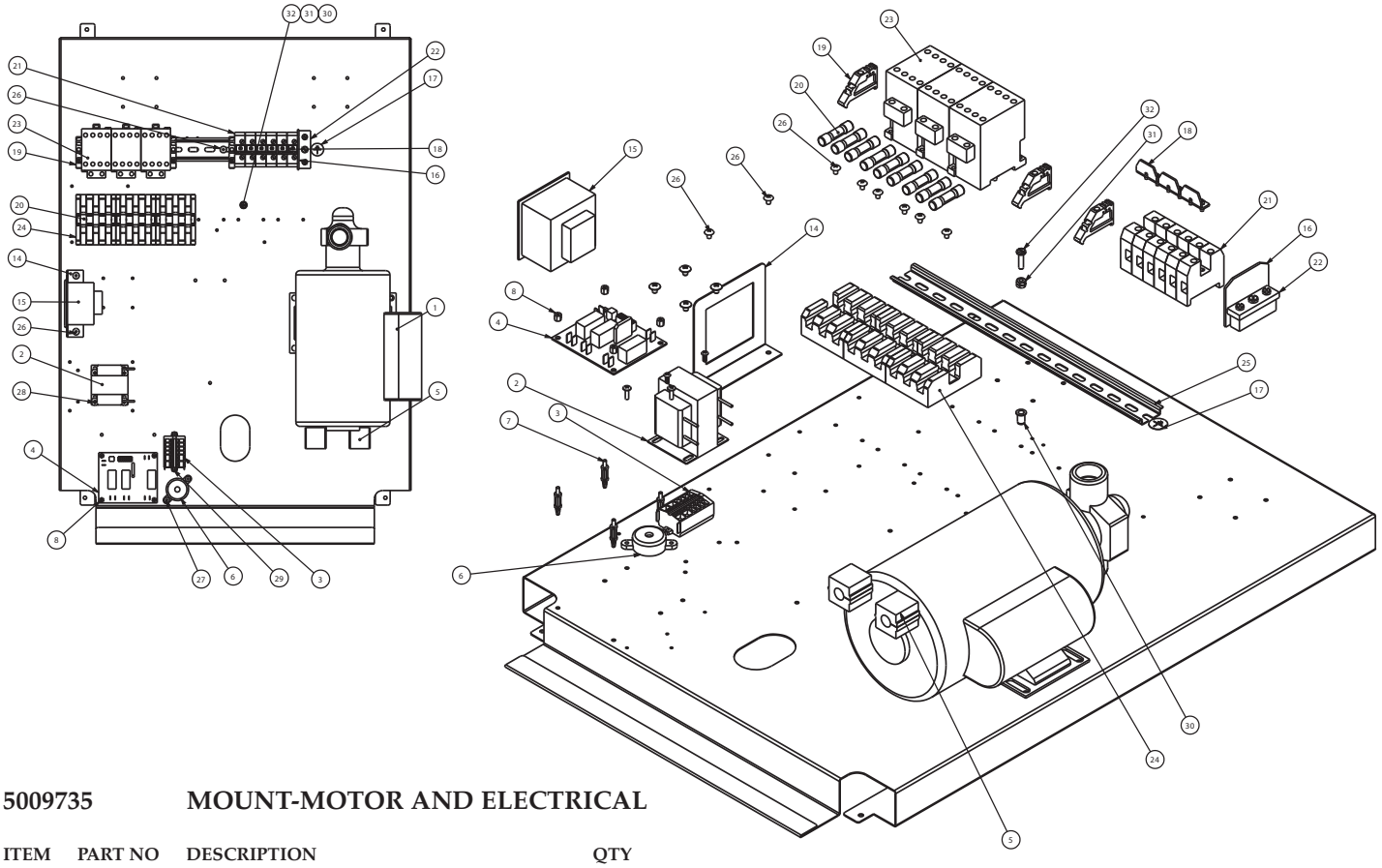
ASF-75E, WITH FILTRATION & LIFTS



5008588 FAT DRAWER ASSEMBLY

ITEM	PART NO	DESCRIPTION	QTY
1	5008589	WLDMT-FAT DRAWER	1
2	CS-27054	CASTER, 2" WHEEL	2
3	CS-27253	CASTER, 2" WHEEL	2
4	5008591	FILTER CARTRIDGE	1
5	SC-26791	SCREW 10-32 X 1/4" PAN HEAD	16
6	HO-27649	HOSE, FRYER FILTER	1

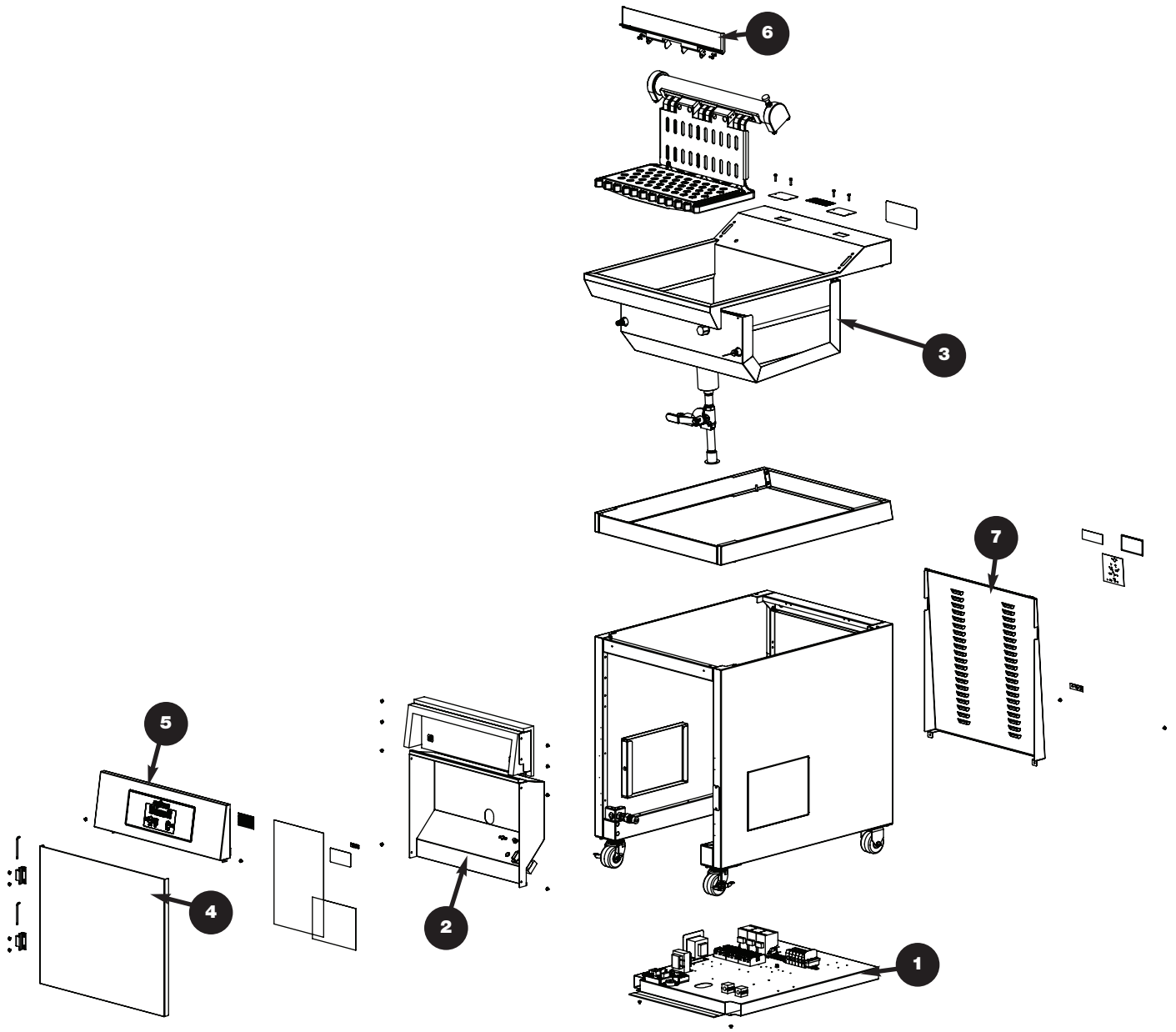
ASF-75E, WITH FILTRATION & LIFTS



5009735 MOUNT-MOTOR AND ELECTRICAL

ITEM	PART NO	DESCRIPTION	QTY
1	1009269	MOTORPLATE-ASF-75	1
2	TN-33282	TRANSFORMER, 230V/24V, 50A,	1
3	BK-34372	T-BLOCK,MODULAR	1
4	BA-34490	RELAY BOARD-ASF-60	1
5	FI-33406	FERRITE FILTER-CLAMP	2
6	BP-3567	BEEPER	1
7	SP-33901	SPACER, 7/16 FOR .125 HOLE IN .062" BRD	4
8	SP-33707	SPACER, SUPPORT, NYL, 1.4"	4
9	FU-34355	FUSE-2A 250V, T-LAG, GLS, MOL	1
10	CD-34380	CORD, SOOW 16GA, 3COND.	1
11	CR-3226	CONNECTOR, TERM., #10 STUD RING	1
12	5007274	WIRESET, ASF-75E, 208-220V	1
13	FU-34274	FUSE-4A SECONDARY, 3AG TYPE	1
14	1006917	BRACKET, HI-LIMIT CONTROLLER	1
15	CC- 34378	CONTROLLER,HI-LIMIT	1
16	TM-3786	TERMINAL, CT, 35MM WALL, PART	1
17	LA-33002	INTERNAL GROUND LABEL	1
18	TM-33837	JUMPER STRIP	3
19	TM-3926	TERMINALS, *CT, PLUG, 6.10	3
20	FU-3860	FUSE-30A, CLASS G, QC	9
21	TM-3780	TERMINAL, CT, MARK, L	6
22	TM-3782	TERMINAL, GROUND, 35MM	1
23	CN-3652	CONTACTOR	3
24	FU-3773	FUSE HOLDER	3
25	1006484	DIN RAIL	1
26	SC-2459	8-32X1/4" PHIL SCREW	12
27	SC-2472	SCREW, 6-32X1/2, NC PHIL TRUSS M/S	2
28	SC-26791	SCREW10-32X1/4" PAN HEAD	4
29	SC-23455	6-32X3/8 RD HD	2
30	HG-22672	10-32 THREADED INSERT	1
31	NU-2215	NUT, 10-32, NF HEX MS, #18-8 S/S	2
32	SC-2071	10-32X3/4 PAN HD	1
33	MO-34469	5EW/S74 MOTOR-230V CE	1

ASF-75E, NO FILTRATION OR LIFTS



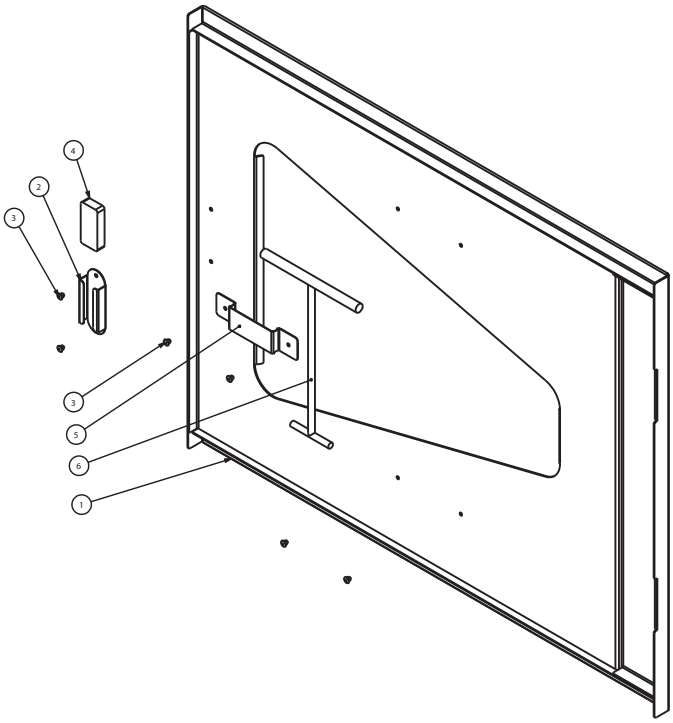
See details for these assemblies on following pages:

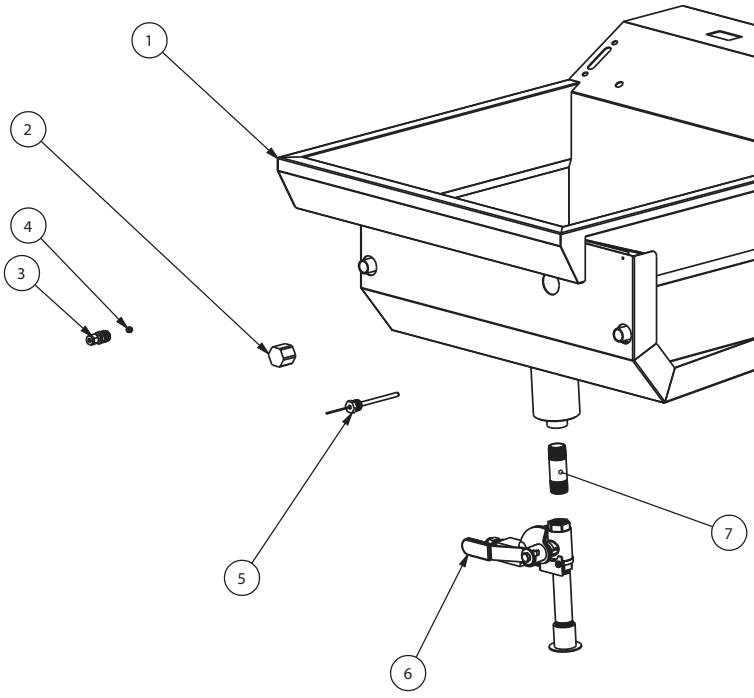
ITEM	PART NO	DESCRIPTION	QTY
1	5009634	MOUNT-MOTOR AND ELECTRICAL	1
2	5009217	PANEL, LOWER ASSY	1
3	5009628	KETTLE-75E, 208-220 BSC	1
4	5009179	DOOR	1
5	5008595	CONTROL PANEL-ASF-75	1
6	5009645	BASKET HANGER	1
7	1009361	PANEL-BACK	1

ASF-75E, NO FILTRATION OR LIFTS

5009179 **DOOR ASSEMBLY**

ITEM	PART NO	DESCRIPTION	QTY
1	5009177	DOOR	1
2	1006303	MAGNET BRACKET	1
3	RI-2097	#42 STAINLESS RIVET	6
4	MA-25734	DOOR MAGNET	1
5	1009689	ELEMENT LIFT BRACKET	1
6	RL-27690	ELEMENT LIFT	1

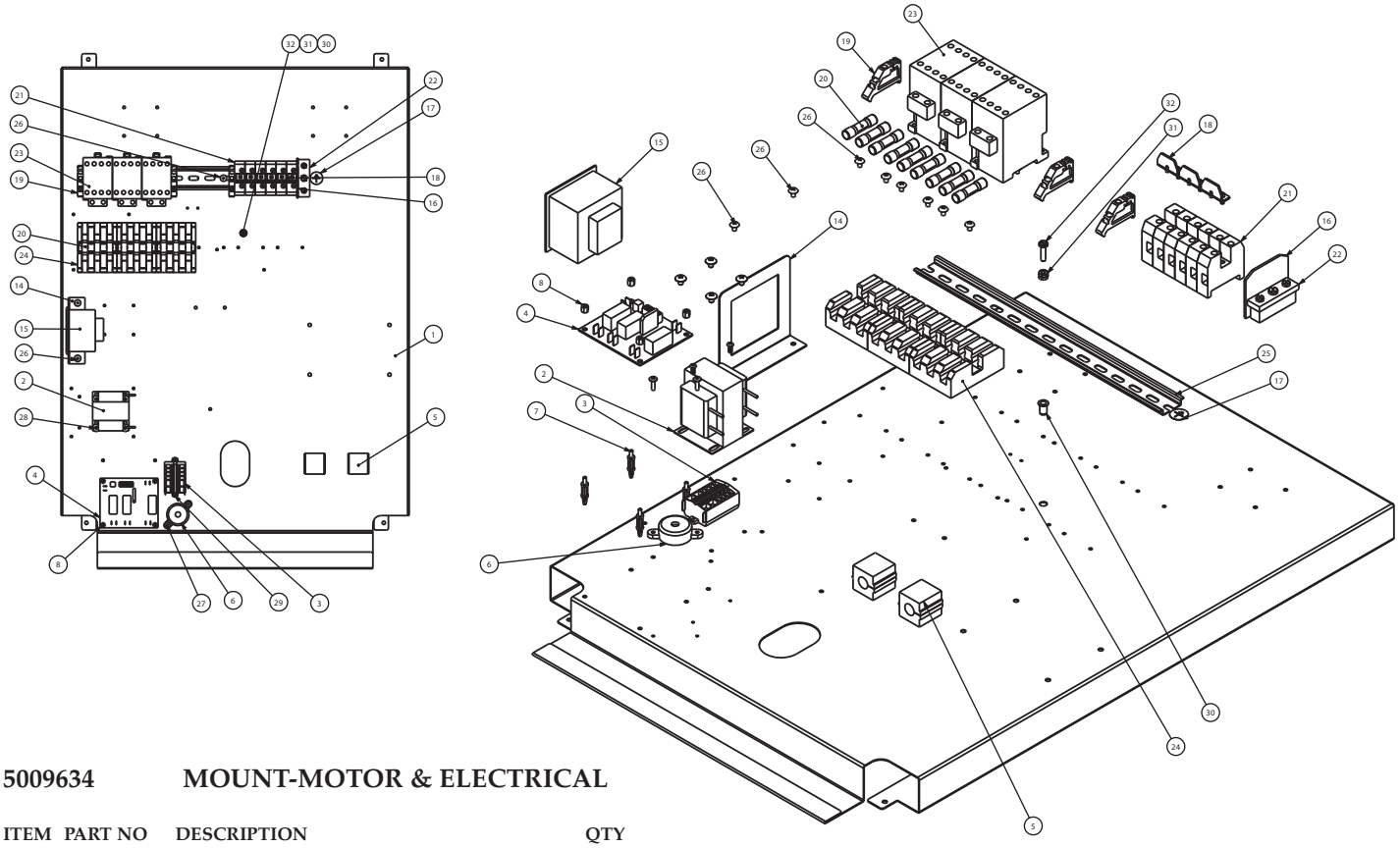




5009628 **KETTLE, 208-220**

ITEM	PART NO	DESCRIPTION	QTY
1	KE-27012	ASF-75E KETTLE ASSY.	1
2	CP-28016	CAP-3/4 NPT	1
3	FT-27250	FITTING-1/4" COMPRESSION	1
4	FT-27251	FERRULE, COMPRESSION, 6MM	1
5	PR-34483	PROBE-NTC THERMISTOR	1
6	5008473	DRAIN ASSEMBLY	1
7	NP-27402	PIPE NIPPLE, 3/4NPT X 10" LG	1

ASF-75E, NO FILTRATION OR LIFTS

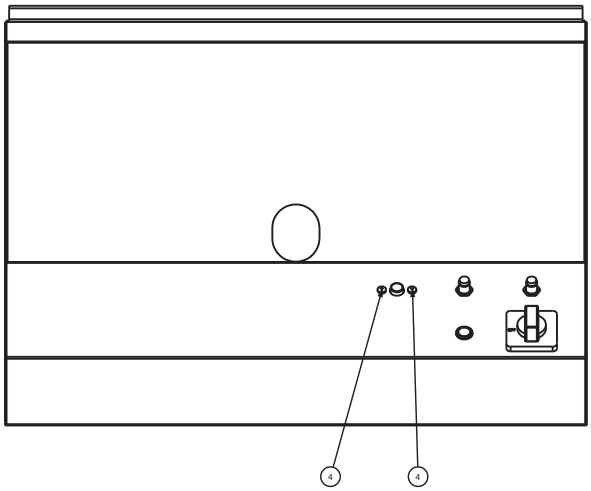


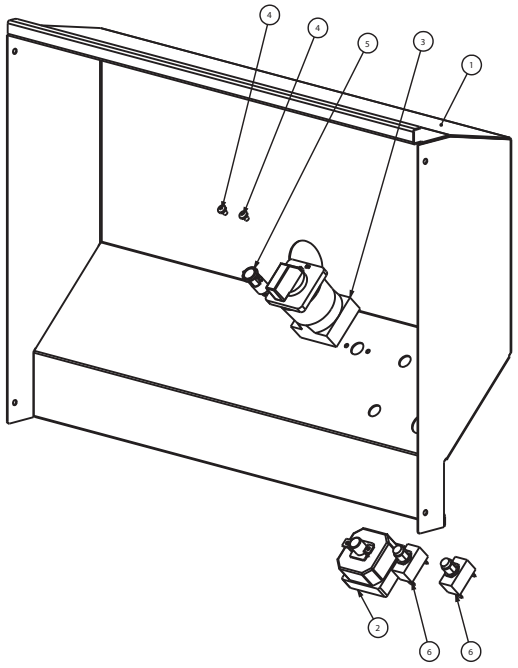
5009634 MOUNT-MOTOR & ELECTRICAL

ITEM	PART NO	DESCRIPTION	QTY
1	1009269	MOTOR PLATE	
2	TN-33282	TRANSFORMER, 230V/24V,50A	1
3	BK-34372	T-BLOCK, MODULAR	1
4	BA-34490	RELAY BOARD ASF-60	1
5	FI-33406	FERRITE FILTER-CLAMP	2
6	BP-3567	BEEPER	1
7	SP-33901	SPACER, 7/16 FOR .125 HOLE IN .062" BRD	4
8	SP-33707	SPACER, SUPPORT, NYL, 1.4"	
9	FU-34355	FUSE-2A250V, T-LAG, GLS, MOL	1
10	CD-34380	5CORD, SOOW 16 GA, 3 COND.	
11	CR-3226	CONNECTOR, TERM., # 10 STUD RING	1
12	5007274	WIRESET, ASF-75E, 208-220V	1
13	FU-34274	FUSE-4 A SECONDARY, 3AG TYPE	1
14	1006917	BRACKET, HI-LIMIT CONTROLLER	1
15	CC-34378	CONTROLLER, HI-LIMIT	1
16	TM-3786	TERMINAL, CT, 35MM WALL, PART	1
17	LA-33002	INTERNAL GROUND LABEL	1
18	TM-33837	JUMPER STRIP	
19	TM-3926	TERMINALS, *CT, PLUG, 6.10	
20	FU-3860	FUSE-30A, CLASSG, QC	9
21	TM-3780	TERMINAL, CT,MARK, L	6
22	TM-3782	TERMINAL, GROUND, 35MM	1
23	CN-3652	CONTACTOR	3
24	FU-3773	FUSEHOLDER	3
25	1006484	DINRAIL	1
26	SC-2459	8-32X1/4" PHILSCREW	12
27	SC-2472	SCREW, 6-32X1/2, NC PHIL TRUSS	2
28	SC-26791	SCREW10-32X1/4"PANHEAD	4
29	SC-23455	66-32X3/8 RD HD	2
30	HG-22672	10-32 THREADED INSERT	1
31	NU-2215	NUT,10-32,NF HEX MS,# 18-8 S/S	2
32	SC-2071	10-32X3/4 PAN HD	1

5009217 PANEL, LOWER ASSY

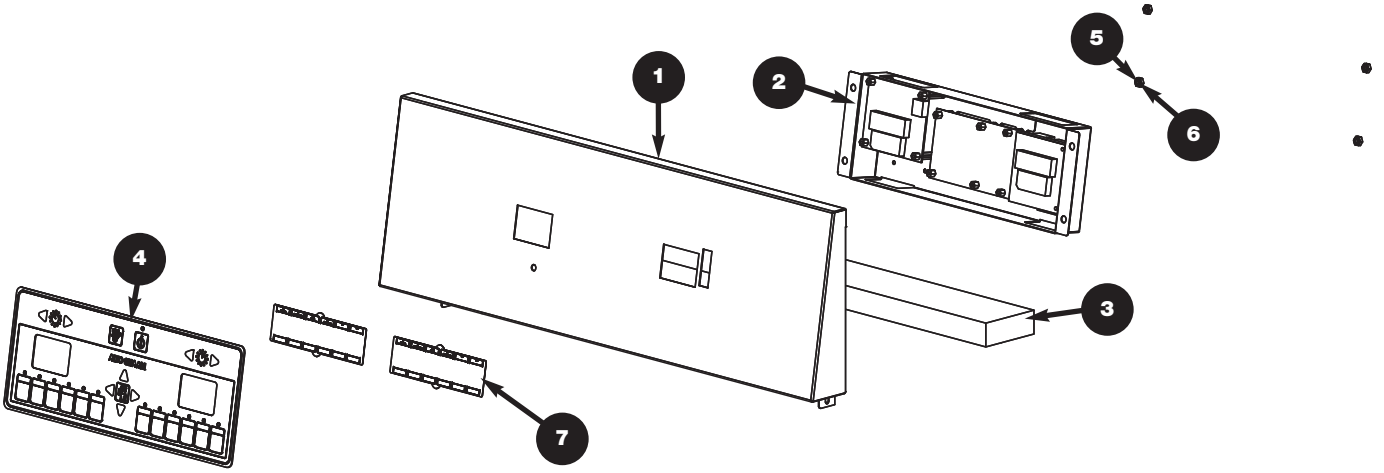
ITEM	PART NO	DESCRIPTION	QTY
1	1009947	PANEL, FRONT LOWER NO FILTER	1
2	TT-34245	THERMOSTAT, HI-LIMIT	1
3	SW-34254	SWITCH, CAM, FOR SINGLE PHASE	1
4	SC-22271	SCREWS,M4-0.7X6MM PHIL	2
5	LI-3951	WHITE PILOT LIGHT 250V	1
6	SW-33495	SWITCH-PUSH BUTTON SPST	2

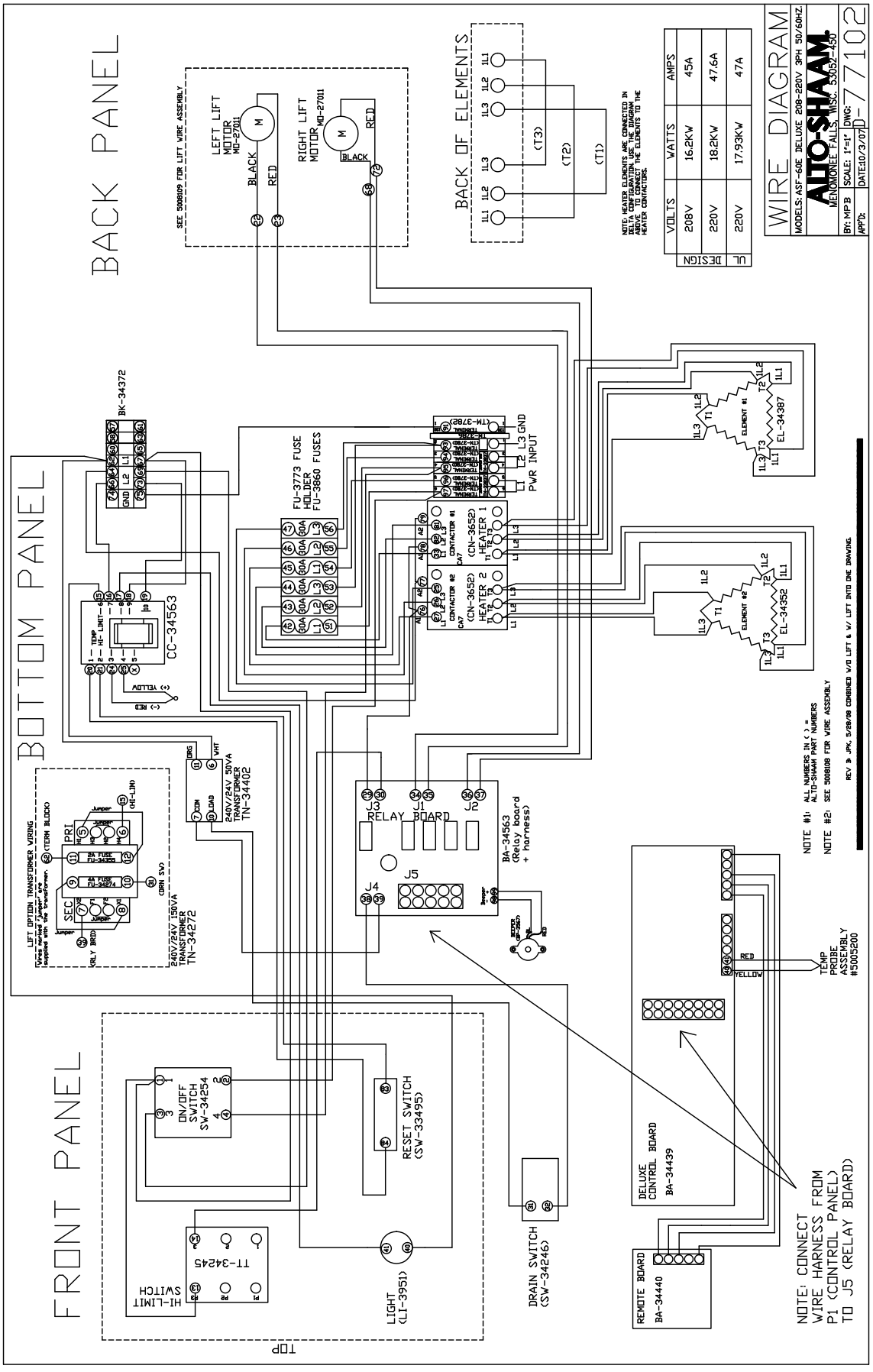


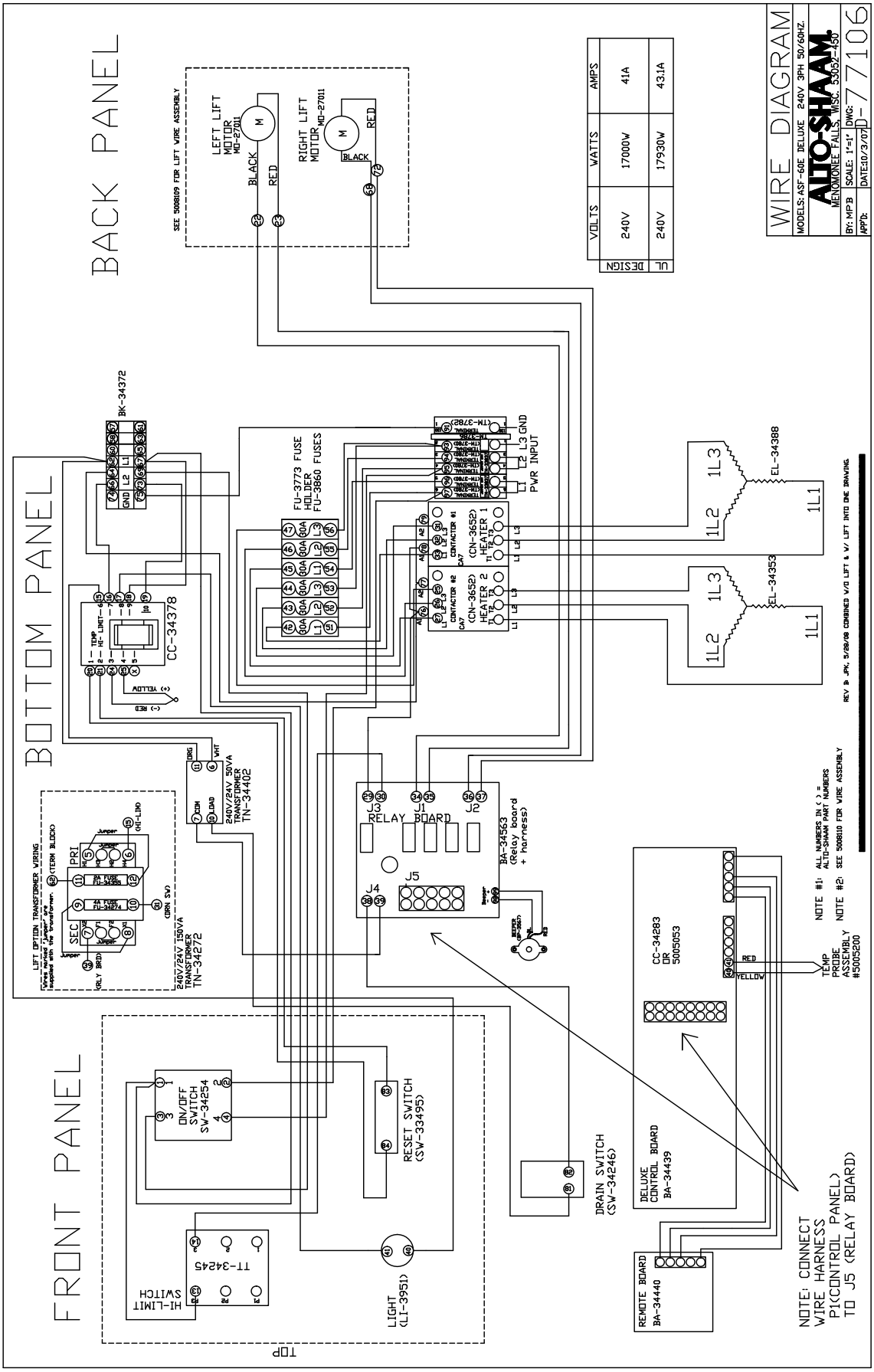


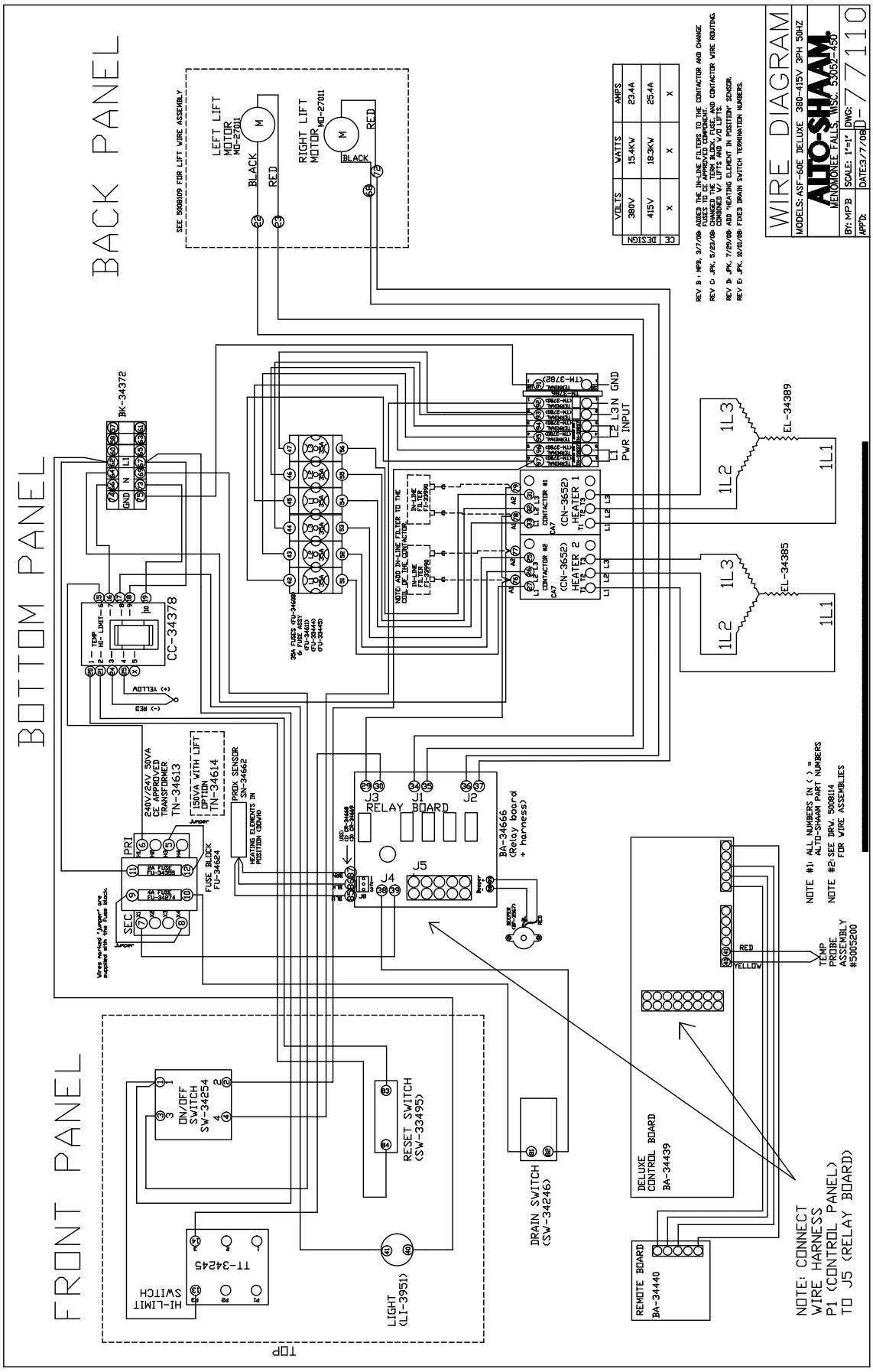
5008595 CONTROL PANEL

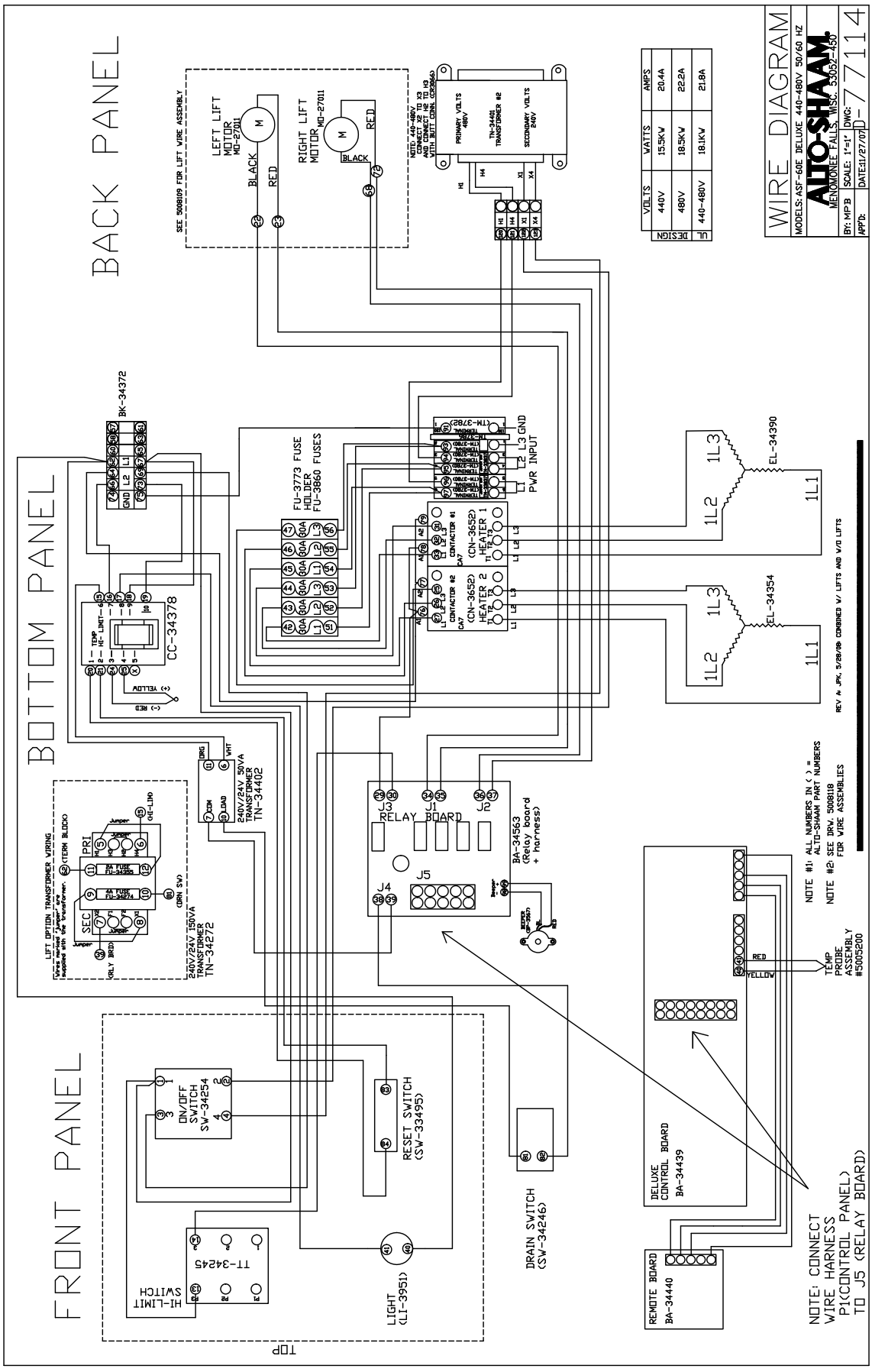
ITEM	PART NO	DESCRIPTION	QTY
1	5008594	WELDMENT-CONTROL PANEL	1
2	5007396	ASSY-CIRCUIT BOARD	1
3	IN-22985	INSULATION, 1/2" CERAMIC	1
4	PE-28090	MAIN OVERLAY-WATLOW	1
5	WS-27045	WASHER, # 8, LOCK WASHER	4
6	NU-2296	NUT, HEX # 8-32	4
7	PE-28110	INSERT-MENU CARD	2

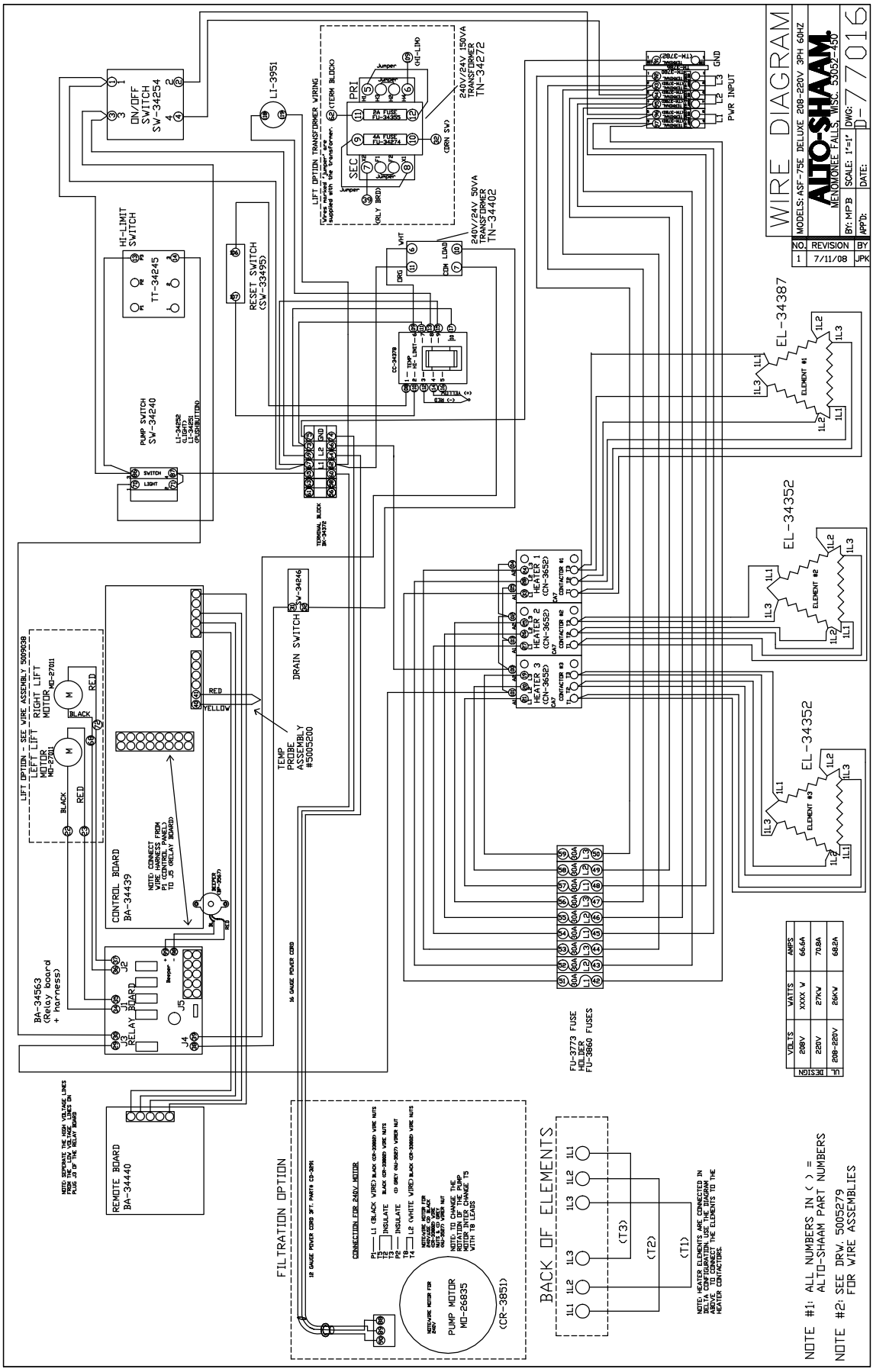


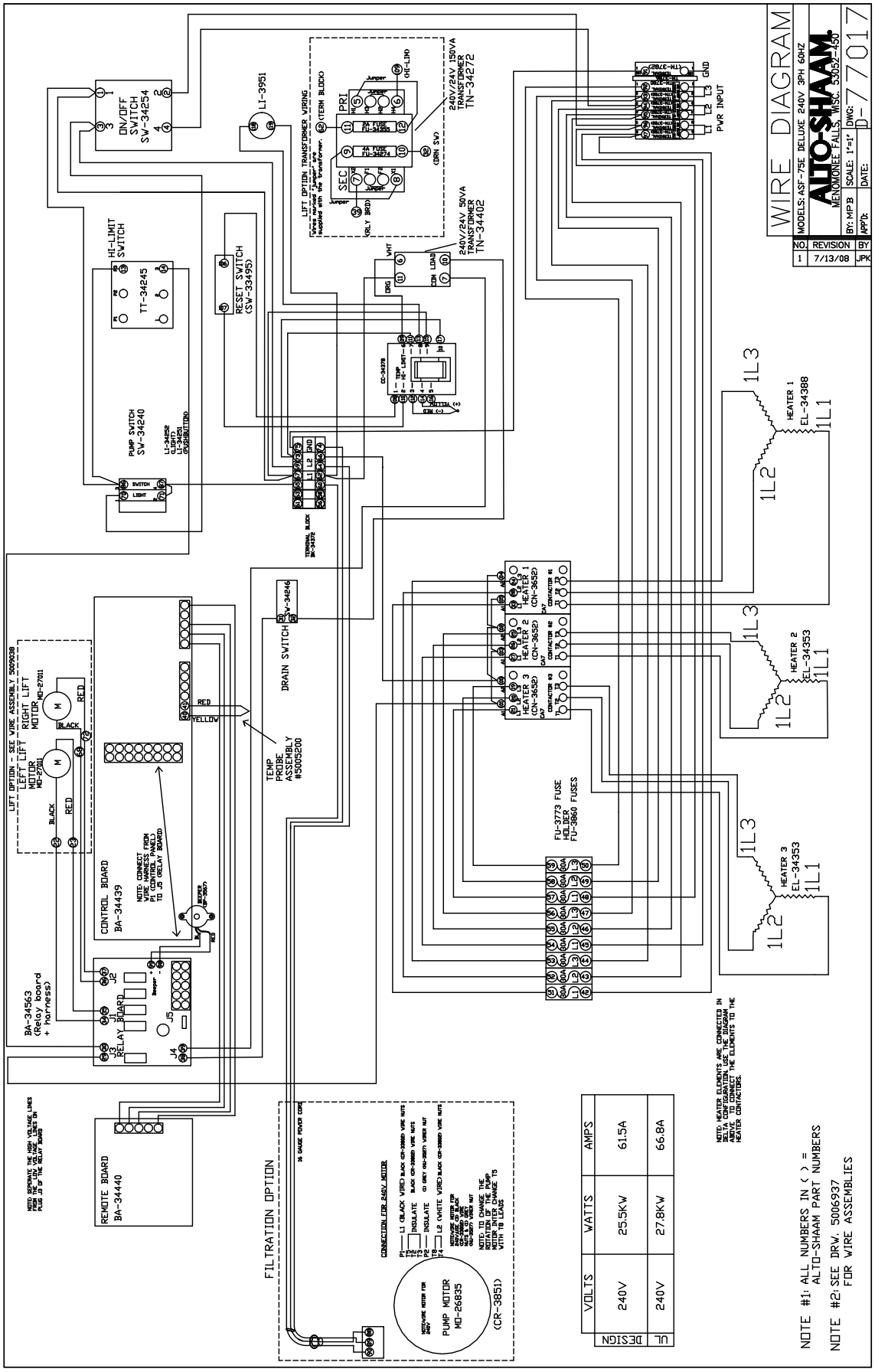

WIRE DIAGRAM
MODELS: ASF-60E DELUXE 208-220V 3PH 50/60HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4904
BY: MPJB
SCALE: 1"=1"
DWG: D-77102
APP'D:
DATE:10/3/07
DESIGN
UL
VOLTS
WATTS
AMPS
208V
16.2KW
45A
220V
18.2KW
47.6A
220V
17.93KW
47A
BACK PANEL
BOTTOM PANEL
FRONT PANEL
BACK OF ELEMENTS
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
BLACK
RED
SEE 5008109 FOR LIFT WIRE ASSEMBLY
BK-34372
CC-34563
FU-3773 FUSE HOLDER
FU-3860 FUSES
PWR INPUT
HEATER 1
HEATER 2
CONTACTOR #1
CONTACTOR #2
(CN-3652)
ELEMENT #1
EL-34387
ELEMENT #2
EL-34352
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 50VA TRANSFORMER TN-34402
RELAY BOARD
BA-34563 (Relay board + harness)
DELUXE CONTROL BOARD BA-34439
REMOTE BOARD BA-34440
TEMP PROBE ASSEMBLY #5005200
ON/OFF SWITCH SW-34254
RESET SWITCH (SW-33495)
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
DRAIN SWITCH (SW-34246)
NOTE: CONNECT WIRE HARNESS FROM P1 (CONTROL PANEL) TO J5 (RELAY BOARD)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE 5008108 FOR WIRE ASSEMBLY
REV B JPK, 5/28/08 COMBINED V/D LIFT & W/ LIFT INTO ONE DRAWING.
TOP

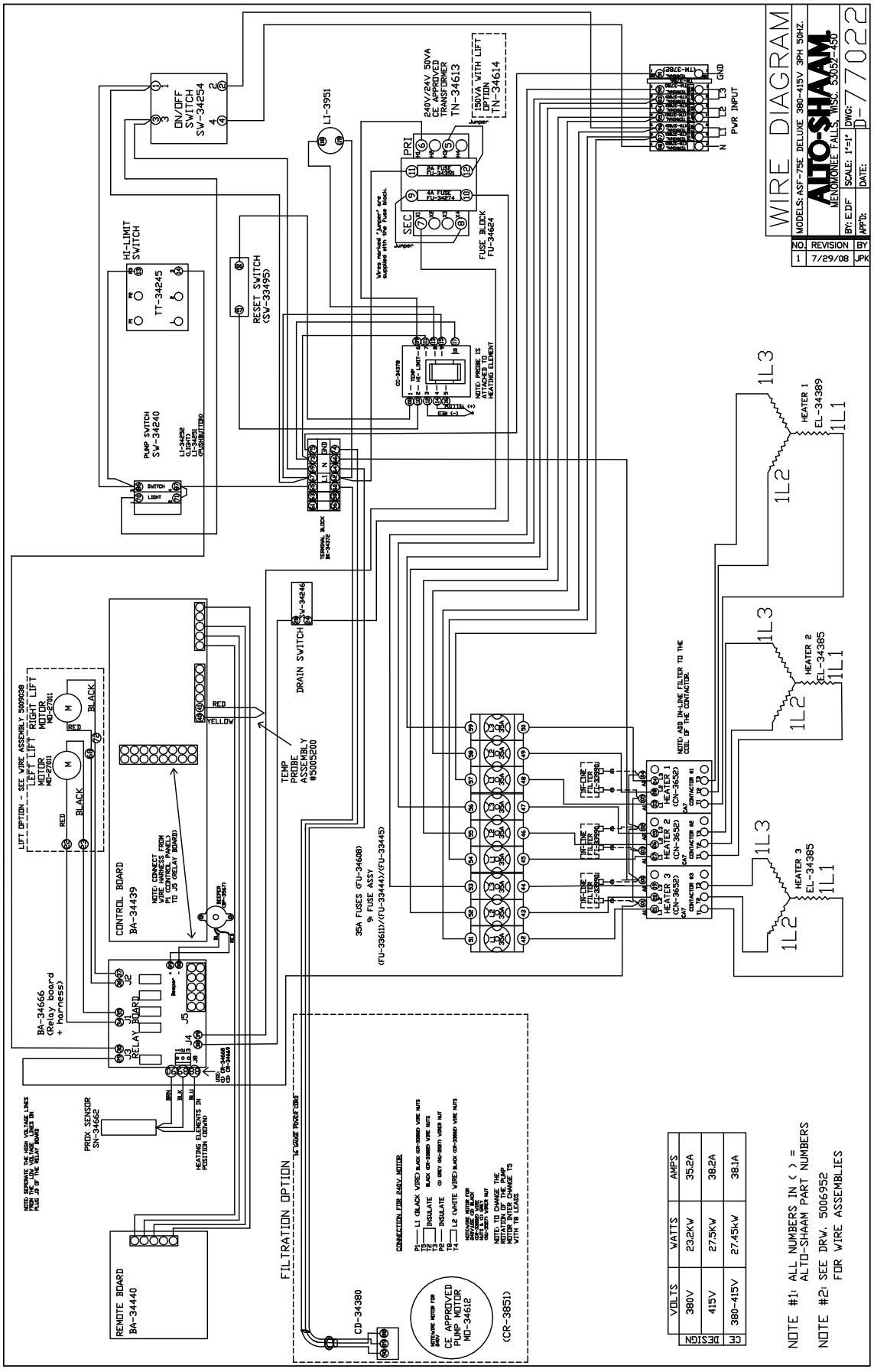

WIRE DIAGRAM
MODELS: ASF-60E DELUXE 240V 3PH 50/60HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4501
BY: MPB
SCALE: 1"=1"
DWG:
APPD:
DATE: 10/3/07
D-7106
DESIGN
UL
VOLTS
WATTS
AMPS
240V
17000W
41A
240V
17930W
43.1A
BACK PANEL
BOTTOM PANEL
FRONT PANEL
TOP
SEE 5008109 FOR LIFT WIRE ASSEMBLY
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
BLACK
RED
BK-34372
CC-34378
FU-3773 FUSE HOLDER FU-3860 FUSES
TM-3782
L1 L2 L3 GND
PWR INPUT
(CN-3652) HEATER 1 CONTACTOR #1
(CN-3652) HEATER 2 CONTACTOR #2
EL-34388
EL-34353
1L1
1L2
1L3
240V/24V 150VA TRANSFORMER TN-34472
240V/24V 50VA TRANSFORMER TN-34402
LIFT OPTION TRANSFORMER WIRING
RELAY BOARD
J1
J2
J3
J4
J5
BA-34563 (Relay board + harness)
DRAIN SWITCH (SW-34246)
DELUXE CONTROL BOARD BA-34439
CC-34283 OR 5005053
TEMP PROBE ASSEMBLY #5005200
RED
YELLOW
REMOTE BOARD BA-34440
ON/OFF SWITCH SW-34254
RESET SWITCH (SW-33495)
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
NOTE: CONNECT WIRE HARNESS P1(CONTROL PANEL) TO J5 (RELAY BOARD)
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE 5008110 FOR WIRE ASSEMBLY
REV B JPG, 5/28/08 COMBINED V/D LIFT & W/ LIFT INTO ONE DRAWING.

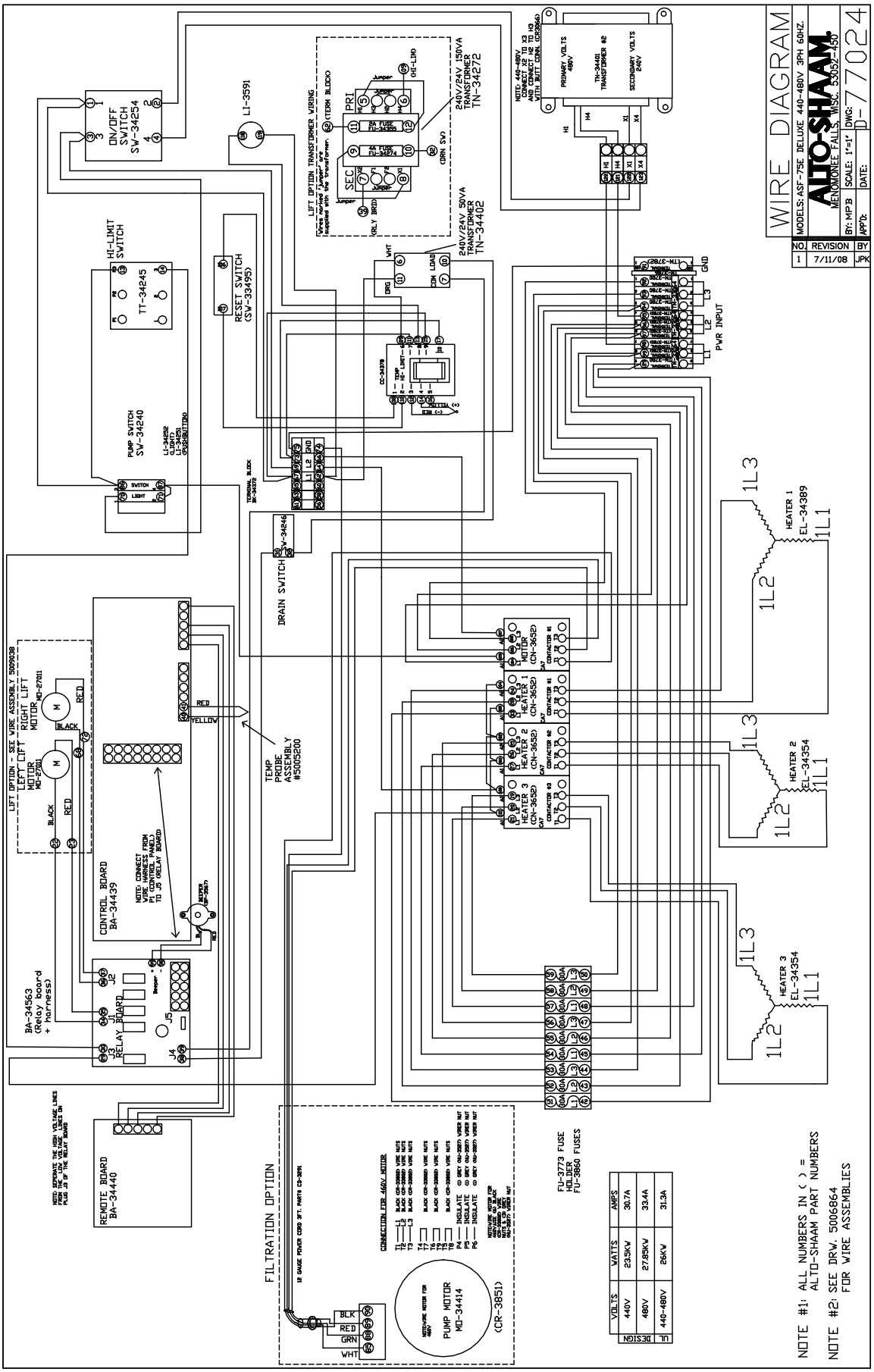

WIRE DIAGRAM
MODELS: ASF-60E DELUXE 380-415V 3PH 50HZ
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-450
BY: MPB
SCALE: 1"=1"
DWG: D-77110
APP'D:
DATE: 3/7/08
BACK PANEL
BOTTOM PANEL
FRONT PANEL
TOP
LEFT LIFT MOTOR MO-27011
RIGHT LIFT MOTOR MO-27011
BLACK
RED
SEE 5008109 FOR LIFT WIRE ASSEMBLY
VOLTS
380V
415V
X
WATTS
15.4KW
18.3KW
X
AMPS
23.4A
25.4A
X
DESIGN
CE
REV B : MPB, 3/7/08 ADDED THE IN-LINE FILTERS TO THE CONTACTOR AND CHANGE FUSES TO CE APPROVED COMPONENT
CHANGED TO TWO 208/240 TRANSFORMERS AND CONTACTOR WIRE ROUTING COMBINED W/ LIFTS AND W/O LIFTS.
REV C: JPK, 5/23/08
REV D JPK, 7/29/08 ADD "HEATING ELEMENT IN POSITION" SENSOR.
REV E: JPK, 10/01/08 FIXED DRAIN SWITCH TERMINATION NUMBERS.
BK-34372
CC-34378
TEMP HI-LIMIT
240V/24V 50VA AUTOMATIC TRANSFORMER TN-34613
150VA WITH LIFT OPTION TN-34614
PRIX SENSOR SN-34662
FUSE BLOCK FU-34624
PRI
SEC
8A FUSE FU-34874
4A FUSE FU-34873
J3
J1
J2
J4
J5
RELAY BOARD
BA-34666 (Relay board + harness)
CONTACTOR #1
CONTACTOR #2
(CN-3652)
HEATER 1
HEATER 2
EL-34389
EL-34385
1L1
1L2
1L3
L1 L2 L3
L2 L3 N GND
PWR INPUT
NOTE: ADD IN-LINE FILTER TO THE COIL OF THE CONTACTOR.
IN-LINE FILTER FI-33998
35A FUSES (FU-34468) & FUSE ASSY (FU-34441) (FU-34445)
DRAIN SWITCH (SW-34246)
RESET SWITCH (SW-33495)
ON/OFF SWITCH SW-34254
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
DELUXE CONTROL BOARD BA-34439
REMOTE BOARD BA-34440
TEMP PROBE ASSEMBLY #5005200
RED
YELLOW
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5008114 FOR WIRE ASSEMBLIES
NOTE: CONNECT WIRE HARNESS P1 (CONTROL PANEL) TO J5 (RELAY BOARD)


BACK PANEL
BOTTOM PANEL
FRONT PANEL
TOP
WIRE DIAGRAM
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052 USA
MODELS: ASF-60E DELUXE 440-480V 50/60 HZ
BY: MP'B
SCALE: 1"=1"
DWG: 7114
APP'D:
DATE: 11/27/07
VOLTS
WATTS
AMPS
440V
15.5KW
20.4A
480V
18.5KW
22.2A
440-480V
18.1KW
21.8A
DESIGN
UL
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
BLACK
RED
SEE 5008109 FOR LIFT WIRE ASSEMBLY
PRIMARY VOLTS 480V
SECONDARY VOLTS 240V
TN-34401 TRANSFORMER #2
BK-34372
CC-34378
FU-3773 FUSE HOLDER
FU-3860 FUSES
(TM-3782)
L2 L3 GND
PWR INPUT
(CN-3652) CONTACTOR #1
(CN-3652) CONTACTOR #2
HEATER 1
HEATER 2
EL-34390
EL-34354
1L1
1L2
1L3
RELAY BOARD
J1
J2
J3
J4
J5
BA-34563 (Relay board + harness)
240V/24V 50VA TRANSFORMER TN-34402
240V/24V 150VA TRANSFORMER TN-34272
LIFT OPTION TRANSFORMER WIRING
PRI
SEC
ON/OFF SWITCH SW-34254
RESET SWITCH (SW-33495)
HI-LIMIT SWITCH
TT-34245
LIGHT (LI-3951)
DRAIN SWITCH (SW-34246)
DELUXE CONTROL BOARD BA-34439
REMOTE BOARD BA-34440
TEMP PROBE ASSEMBLY #5005200
RED
YELLOW
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5008118 FOR WIRE ASSEMBLIES
REV A JPL 5/28/08 COMBINED W/ LIFTS AND W/O LIFTS
NOTE: CONNECT WIRE HARNESS P1(CONTROL PANEL) TO J5 (RELAY BOARD)


WIRE DIAGRAM
MODELS: ASF-75E DELUXE 208-220V 3PH 60HZ
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4550
BY: MP/B
SCALE: 1"=1"
DWG: D-77016
APP'D:
DATE:
NO. REVISION BY
1 7/11/08 JPK
DIN/OFF SWITCH SW-34254
HI-LIMIT SWITCH TT-34245
RESET SWITCH (SW-33495)
PUMP SWITCH SW-34240
LI-3951
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 50VA TRANSFORMER TN-34402
PWR INPUT
CONTROL BOARD BA-34439
RELAY BOARD BA-34563 (Relay board + harness)
REMOTE BOARD BA-34440
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
TEMP PROBE ASSEMBLY #5005200
DRAIN SWITCH SW-34246
HEATER 1 (CN-36520)
HEATER 2 (CN-36520)
HEATER 3 (CN-36520)
EL-34387
EL-34352
EL-34352
ELEMENT #1
ELEMENT #2
ELEMENT #3
FU-3773 FUSE FU-3773 FU-3860 FUSES
PUMP MOTOR MD-26835 (CR-3851)
FILTRATION OPTION
BACK OF ELEMENTS
VOLTS WATTS AMPS
208V XXXX W 66.6A
220V 27KW 70.8A
208-220V 26KW 68.2A
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5005279 FOR WIRE ASSEMBLIES


WIRE DIAGRAM
MODELS: ASF-75E DELUXE 240V 3PH 60HZ
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4501
BY: MPB
SCALE: 1"=1"
DWG: D-77017
APP'D:
DATE:
NO. REVISION BY
1 7/13/08 JPK
DON/OFF SWITCH SW-34254
HI-LIMIT SWITCH TT-34245
RESET SWITCH (SW-33495)
PUMP SWITCH SW-34240
LI-3951
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 50VA TRANSFORMER TN-34402
LIFT OPTION TRANSFORMER WIRING
(TERM BLOCK)
PWR INPUT
L1 L2 L3 GND
CONTROL BOARD BA-34439
RELAY BOARD
BA-34563 (Relay board + harness)
REMOTE BOARD BA-34440
LIFT OPTION - SEE WIRE ASSEMBLY 5009038
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
TEMP PROBE ASSEMBLY #5005E00
DRAIN SWITCH SW-34246
HEATER 1 CON-3652P
HEATER 2 CON-3652P
HEATER 3 CON-3652P
FU-3773 FUSE HLDR FU-3860 FUSES
HEATER 1 EL-34388
HEATER 2 EL-34353
HEATER 3 EL-34353
1L1 1L2 1L3
FILTRATION OPTION
PUMP MOTOR MD-26835 (CR-3851)
CONNECTION FOR 240V MOTOR
16 GAUGE POWER CORD
L1 (BLACK WIRE) BLACK CR-3888D WIRE NUTS
L2 (WHITE WIRE) BLACK CR-3888D WIRE NUTS
INSULATE BLACK CR-3888D WIRE NUTS
INSULATE GREY MA-3887P WIRE NUT
REMOVE NOTED JUMPER FOR 240V MOTOR
REMOVE NOTED JUMPER FOR 208V MOTOR
ROTATION OF THE PUMP MOTOR MAY CHANGE THE ROTATION OF THE PUMP MOTOR. INTERCHANGE T5 WITH T6 LEADS
VOLTS WATTS AMPS
DESIGN
UL
240V 25.5KW 61.5A
240V 27.8KW 66.8A
NOTE: HEATER ELEMENTS ARE CONNECTED IN DELTA CONFIGURATION. USE DIAGRAM ABOVE TO CONNECT THE ELEMENTS TO THE HEATER CONTACTORS.
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5006937 FOR WIRE ASSEMBLIES


WIRE DIAGRAM
MODELS: ASF-75E DELUXE 380-415V 3PH 50HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4904
BY: E.DIF
APP'D:
SCALE: 1"=1"
DATE:
DWG: D-77022
NO. REVISION BY
1 7/29/08 JPK
DN/OFF SWITCH SW-34254
LI-3951
240V/24V 50VA CE APPROVED TRANSFORMER TN-34613
150VA WITH LIFT OPTION TN-34614
PRI
SEC
FUSE BLOCK FU-34624
HI-LIMIT SWITCH
TT-34245
RESET SWITCH (SW-33495)
PUMP SWITCH SW-34240
DRAIN SWITCH
TEMP PROBE ASSEMBLY #5005200
CONTROL BOARD BA-34439
RELAY BOARD
BA-34666 (Relay board + harness)
REMOTE BOARD BA-34440
PROX SENSOR SW-34462
FILTRATION OPTION
CD-34380
CE APPROVED PUMP MOTOR MD-34612
(CR-3851)
HEATER 1 EL-34389
HEATER 2 EL-34385
HEATER 3 EL-34385
1L1
1L2
1L3
PWR INPUT
L1 L2 L3 GND
VOLTS WATTS AMPS
380V 23.2KW 35.2A
415V 27.5KW 38.2A
380-415V 27.45kW 38.1A
DESIGN CE
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5006952 FOR WIRE ASSEMBLIES


WIRE DIAGRAM
MODELS: ASF-75E DELUXE 440-480V 3PH 60HZ.
ALTO-SHAAM
MENOMONEE FALLS, WISC. 53052-4301
BY: MP B
SCALE: 1"=1"
DWG: D-77024
DATE:
APP'D:
NO. REVISION BY
1 7/11/08 JPK
LIFT OPTION - SEE WIRE ASSEMBLY 5009038
LEFT LIFT MOTOR MD-27011
RIGHT LIFT MOTOR MD-27011
CONTROL BOARD BA-34439
REMOTE BOARD BA-34440
BA-34563 (Relay board + harness)
RELAY BOARD
TEMP PROBE ASSEMBLY #5005200
DRAIN SWITCH SW-34246
HI-LIMIT SWITCH TT-34245
RESET SWITCH (SW-34459)
PUMP SWITCH SW-34240
ON/OFF SWITCH SW-34254
LT-3591
240V/24V 150VA TRANSFORMER TN-34272
240V/24V 50VA TRANSFORMER TN-34402
TN-34401 TRANSFORMER #2
PRIMARY VOLTS 480V
SECONDARY VOLTS 240V
PWR INPUT
HEATER 1 EL-34389
HEATER 2 EL-34354
HEATER 3 EL-34354
1L1
1L2
1L3
FILTRATION OPTION
PUMP MOTOR MD-34414 (CR-3851)
FU-3773 FUSE HOLDER
FU-3860 FUSES
VOLTS WATTS AMPS
440V 23.5KW 30.7A
480V 27.85KW 33.4A
440-480V 25KW 31.3A
DESIGN
NOTE #1: ALL NUMBERS IN ( ) = ALTO-SHAAM PART NUMBERS
NOTE #2: SEE DRW. 5006964 FOR WIRE ASSEMBLIES

TRANSPORTATION DAMAGE and CLAIMS

All Alto-Shaam equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.

2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.

3. Note all damage to packages directly on the carrier's delivery receipt.

4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.

5. If the driver refuses to allow inspection, write the following on the delivery receipt:
   Driver refuses to allow inspection of containers for visible damage.

6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.

7. Save any packages and packing material for further inspection by the carrier.

8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

ALTO SHAAM LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser only that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

The parts warranty period is as follows:

For the refrigeration compressor on Alto-Shaam Quickchillers™, five (5) years from the date of installation.

For the heating element on Halo Heat® cook/hold ovens, as long as the original purchaser owns the oven.

For all other parts, one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

The labor warranty period is one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

Alto-Shaam will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees.

To be valid, a warranty claim must be asserted during the applicable warranty period. This warranty is not transferable.

THIS WARRANTY DOES NOT APPLY TO:

1. Calibration.
2. Replacement of light bulbs and/or the replacement of display case glass due to damage of any kind.
3. Equipment damage caused by accident, shipping, improper installation or alteration.
4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
5. Damage incurred as a direct result of poor water quality, inadequate maintenance of steam generators and/or surfaces affected by water quality. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator.
6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Cleaner, including but not limited to damage due to chlorine or other harmful chemicals. **Use of Alto-Shaam's Combitherm® Cleaner on Combitherm® ovens is highly recommended.**
7. Any losses or damage resulting from malfunction, including loss of product or consequential or incidental damages of any kind.
8. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

ALTO-SHAAM, INC.

Effective 02/09

RECORD THE MODEL AND SERIAL NUMBER OF THE APPLIANCE FOR EASY REFERENCE.
ALWAYS REFER TO BOTH MODEL AND SERIAL NUMBER IN ANY CONTACT WITH ALTO-SHAAM REGARDING THIS APPLIANCE.

Model: _____ Date Installed: _____
Voltage: _____ Purchased From: _____
Serial Number: _____ _____

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